DOCUMENT RESUME

ED 192 625 FL 011 893

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TITLE Evaluation of the Status and Effects of Bilingual Vocational Training. Final Report [and] Executive Summary.
INSTITUTION Kirschner Associates, Inc., Albuquerque, N. Mex.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Office of Evaluation and Dissemination.
PUB DATE Mar 80
CONTRACT 300-77-0239
NOTE 305p.

EDRS PRICE MF01/PC13 Plus Postage.
DESCRIPTORS Adult Education; Bilingual Education; English (Second Language); Formative Evaluation; Legislation; Program Administration; *Program Effectiveness; Surveys; *Vocational Education
IDENTIFIERS *Bilingual Programs; *Limited English Speaking

ABSTRACT

Vocational educational programs for adults with limited English-speaking (LES) ability were surveyed and evaluated. The survey facilitated a profile of the status of bilingual vocational training, of the target group and trainee characteristics, of varieties of program design and operation, of instructional practices in English as a second language, and of outcomes for trainees. On the basis of this descriptive information, an analysis produced an assessment with the following major points: (1) efforts of LES persons to profit from vocational education are severely restricted and the problem affects millions of United States citizens; (2) inadequately trained LES persons are unable to fill the critical need for trained personnel in vital occupational categories; (3) LES persons suffer the hardships of unemployment or underemployment; (4) a critical shortage exists of instructors possessing both the job knowledge and dual language capabilities required for vocational instruction of LES persons; and (5) a shortage exists of instructional materials and of instructional methods suitable for bilingual vocational training. A process evaluation was generally approbatory regarding enrollment of appropriate target groups, effectiveness of instructional services, adequacy of noninstructional and support services, and effectiveness of planning and management. A number of legislative and administrative recommendations are offered. (JB)

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KIRSCHNER ASSOCIATES, INC.

FINAL REPORT

EVALUATION OF THE STATUS AND EFFECTS OF BILINGUAL VOCATIONAL TRAINING

Prepared as part of
Contract No. 300-77-0239

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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March 1980

FL011893

Submitted to:
Office of Evaluation and Dissemination
U.S. Office of Education
Department of Health, Education, and Welfare

Submitted by:
Kirschner Associates, Inc.
and
Management Consultants Unlimited, Inc.

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JUL 2 9 1980

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This publication was prepared pursuant to a contract (No. 300-77-0239) with the Office of Evaluation and Dissemination, U.S. Office of Education, Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express fully their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Evaluation and Dissemination position or policy.

PREFACE

As the first comprehensive study of bilingual vocational training, this evaluation generated information of value to policy makers, program designers, administrators, instructors, and researchers. This report provides not only an evaluation of bilingual vocational training, but also a considerable amount of factual data regarding who the programs serve and how the programs operate. As bilingual vocational training expands as a method for increasing job skills of limited English-speaking adults, information needs of program operators are accelerating. Hopefuily, this report will help satisfy those needs. Detailed tabulations are provided, primarily in the appendices, of the characteristics of trainees in bilingual vocational programs. Included are considerable amounts of data on English language proficiency of trainees. The text and appendices also contain data regarding on-the-job English needs for various occupations.

The authors are deeply indebted to numerous persons for their assistance during this project. The Project Officer for this contract was Ms. Dorothy Shuler of the Office of Evaluation and Dissemination, U.S. Office of Education. Our special gratitude goes to Ms. Shuler, who was a continual source of guidance and encouragement throughout the three years of the contract. During the early stages of the study, Ms. Shuler was assisted by Ms. Anamaria Viveros-Long, who provided many helpful suggestions for the study design. Helpful comments also were provided by Dr. Emmett Fleming of the Office of Evaluation and Dissemination.

The cooperation and assistance of Dr. Doris Gunderson, who administered the Subpart 3 program during the period of this evaluation, and her staff are gratefully acknowledged.

Among the other government officials who were helpful in the conduct of the study are: Dr. Dorothy Waggoner, Mr. Leslie Silverman and Mr. Ron Jessee, National Center for Education Statistics; Mr. Greg Gross, Employment and Training Administration, U.S. Department of Labor: and Mr. George Sylvestre, Bureau of Labor Statistics, U.S. Department of Labor.

Dr. Paul Myers and Dr. Walter Howard of the Committee on Evaluation and Information of the Chief State School Officers were helpful in coordinating the early activities of this study with the State Departments of Vocational Education. Officials in all of the States provided information useful in identifying bilingual vocational training programs.

Our gratitude is extended to the directors, staffs and instructors of the 38 bilingual vocational training programs studied. Their help and cooperation were invaluable in accomplishing the field work for this study. Most importantly, we thank the 718 trainees who participated for their unique assistance and contributions to this evaluation.

Assistance was provided to the contractor's and subcontractor's staff during pilot field visits by Mr. J. William Goddard, Director of Career and Vocational Education, Sweetwater Union High School District, Chula

Vista, California; and Dr. Paul Roman, Director, Rancho Santiago Community College District, Santa Ana, California. We are grateful to the cooperation shown by Mr. Goddard and Dr. Roman and the members of their staffs as well as to officials of Santa Ana Community College.

The following persons aided in the selection of English language proficiency measures: Dr. Walter Stolz of the National Institutes of Health (formerly of the Center for Applied Linguistics); Ms. Mary Jo Krowitz of the World Bank; Mr. Pardee Lowe, Jr. of the Central Intelligence Agency; Ms. Claudia Wilds, Dr. Ginny Redish and Ms. Mary Galvan, independent consultants.

Assistance in the design of the study was provided by Dr. Ty Hartwell, Research Triangle Institute; Dr. Burton Fisher, consultant to the Institute for Research on Poverty and Language, University of Wisconsin; and Dr. Stanley Lieberson, Arizona State University. Dr. William Peters of the University of New Mexico had primarily responsiblity for the sampling design.

Ms. Donna Ilyin assisted in the adaptation of the Ilyin Oral Interview for this evaluation and participated in training the field staff. Dr. Stolz and Ms. Ilyin assisted in the review and interpretation of language proficiency data.

Dr. Clement Chow, Iowa State University, assisted in training interviewers and translated trainee interview schedules to Chinese. Translation to Spanish was performed by Mr. E. E. Ortega, Jr. of Management Consultants Unlimited, Inc., the subcontractor. Mr. Ortega had major responsibilities for training and supervision of field staff. Dr. Morris Peterson of the contractor's staff also assisted in field staff training.

The field work was divided between the contractor and subcontractor and was conducted by the following persons:

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Among the Contractor's staff, Ms. Cynthia Lancer had primary responsibility for conducting the inventory of bilingual vocational training programs and Dr. Mary Ella Brady assisted in the identification and adaptation of language proficiency measures. Dr. Peterson assisted throughout the evaluation in all of its aspects.

Computer programming and automatic data processing were handled by Mr. Barclay C. Bean.

Our appreciation is extended to those who reviewed the final report in draft: Dr. Stolz, Mr. Ortega, Dr. Chow, Dr. Peterson, and Mr. Richard W. Kirschner. Report production was handled by Ms. Joy S. Ford and Ms. Yvonne F. Clark.

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I. BACKGROUND

EVALUATION BACKGROUND AND OBJECTIVES

Bilingual vocational training programs for adults with limited English-speaking ability are authorized under the Vocational Education Act of 1963, as amended. These programs were initiated under Part J of the Educational Amendments of 1974,[1] and were continued under Subpart 3 of Part B, Title II, added to the Vocational Education Act by the Educational Amendments of 1976.[2]

Subpart 3 requires the Commissioner of Education and the Secretary of Labor to report annually on the status and impacts of bilingual vocational training throughout the nation:

> The Commissioner [of Education] and the Secretary of Labor together shall...(1) develop and disseminate accurate information on the status of bilingual vocational training in all parts of the United States; (2) evaluate the impact of such... training on the shortages of well-trained personnel, the unemployment or underemployment of persons with limited English-speaking ability, and the ability of such persons to acquire sufficient job skills and English language skills to contribute fully to the economy of the United States; and (3) report their findings annually to the President and the Congress.[3]

A purpose of this evaluation, in addition to helping fulfill the Congressional mandate, is to provide policy makers and program administrators

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[1] P.L. 93-380

[2] P.L. 94-482

[3] Section 182, Subpart 3, Part B, Title II, P.L. 94-482.

with information on the clientele and operation of bilingual vocational training programs. This evaluation is the first study to examine such programs comprehensively.

The evaluation has the following objectives:

1. To identify existing bilingual vocational training programs and classes.

2. To determine the demographic, socioeconomic and language characteristics of the limited English-speaking adults in bilingual vocational training classes.

3. To ascertain and describe basic features of bilingual vocational training, such as occupational skills offered, vocational and English language instructional practices, the backgrounds of instructors, and procedures for instructing limited English-speaking trainees.

4. To determine trainee post-program labor market experiences (outcomes) and relationship of outcomes to English language ability.

5. To ascertain trainee reactions to and satisfaction with their instruction.

6. To assess whether and to what extent bilingual vocational training programs alleviate or have the potential to alleviate occupational skills shortages.

7. To analyze bilingual vocational training operations and to relate program and instructional features to trainee outcomes.

This report also explores the implications of the findings for program policy and administration.

An inventory of bilingual vocational training programs and classes for adults was conducted in the Fall of 1977. The inventory provided the information to fulfill the first objective listed above; it established also the universe of programs and classes for the evaluation. The evaluation study included two phases of data collection in addition to the

inventory. Information regarding the second and third objectives--characteristics of trainees and programs--was gathered during the first phase of data collection in the Summer of 1978. The second phase of data collection, consisting of a follow-up survey of trainees, was conducted during the Spring and Summer of 1979.

PROGRAM BACKGROUND

Development and Status of Bilingual Vocational Training

Bilingual vocational training has developed in response to the needs of adults of limited English-speaking ability. Persons of limited English-speaking ability are members of language minorities; that is, they come from an environment, in this or another country, where a non-English language is dominant. These persons also are members of racial or ethnic minority groups, and occupational skills acquisition is only one of many important needs. Many persons in minority groups face discrimination in employment, lack of training and educational opportunities, and other problems. Limited ability in the predominant language can, of course, compound these problems. Specifically, a person of limited English-speaking ability may have difficulties finding and keeping jobs because of communication problems with personnel managers, supervisors, co-workers or customers. Similar problems may be encountered by these persons when seeking vocational education.

The traditional approach for serving adults of limited English-speaking ability is to provide them with English-as-a-second language (ESL) instruction prior to vocational courses in which instructors speak only English. This approach has been prevalent because ESL is more widely available and accessible to limited English-speaking persons than is bilingual vocational training. However, persons whose only option is to take ESL prior to vocational training must postpone their vocational training. Thus, their entry or re-entry into the labor force also may be delayed.

Bilingual vocational training is an alternative to this traditional approach and allows the limited English-speaking adult to learn a vocational skill through instruction in both his/her native language and English. The occupational skills instruction is the main purpose and focus of bilingual vocational training. Bilingual instruction enables trainees who would not understand all of the instruction if it were conducted only in English to acquire vocational skills. ESL instruction may be provided to supplement the vocational skills training.

Bilingual vocational training has been practiced formally and informally for more than a decade. Informal bilingual vocational training occurs when an instructor uses a non-English language for clarification when the need arises. Conversely, formal bilingual vocational training involves the systematic introduction of English as a medium of instruction.

Until the mid-1970s, the limited number of bilingual vocational training programs in existence were the result of local initiative. Discretionary vocational education funds sometimes were used for these early bilingual training efforts. These bilingual training efforts served indigenous limited English-speaking populations, immigrants from various countries, and refugee groups such as persons who fled from Cuba.

Funding for employment and training services for limited English-speaking adults was provided under the Comprehensive Employment and Training Act of 1973 (CETA). The authorized services for limited English-speaking adults under CETA included but were not restricted to bilingual vocational training. Part J and subsequently Subpart 3 of Part B, Title II of the Vocational Education Act have funded bilingual vocational training programs annually since fiscal year 1976. During the first 4 years of Part J/Subpart 3, a total of 77 projects were funded to train approximately 6,800 persons.

In addition to Subpart 3 funding, the Vocational Education Act contains other funding for limited English-speaking adults which may be used

for bilingual vocational training or other related services. The 1974 Educational Amendments identified limited English-speaking adults as a target group for which States were authorized to provide vocational training. States were allowed to set their own priorities for the use of funds in vocational education for the limited English-speaking and other target groups.

Special set-asides for vocational education for limited English-speaking persons were included in the 1976 Educational Amendments under provisions for "National Priority Programs."[1] The law specifies that States must set aside part of their vocational education allotments to serve disadvantaged persons and persons of limited English-speaking ability to the extent that the latter are represented in the State's population.

The effect of these recent legislative provisions is, of course, to increase the amount of occupational training available for limited English-speaking adults. Although Subpart 3 still is the only legislation that requires bilingual vocational training, increases in the number of programs providing such training appear to be a highly probable result.

By late 1977, there were 98 bilingual vocational training programs in 20 states, excluding programs funded under CETA. These 98 programs operated 267 bilingual vocational classes. More than one-fifth of the programs (22) and about one-sixth of the classes (44) were funded under Subpart 3. (See Table 1.)

About 40 percent of the bilingual vocational training programs (42) and classes (103) were located in California. Other States with relatively large numbers of classes were New Mexico (37), Massachusetts (24), Florida (20), Texas (19), New York (15), and Arizona (12).

In 8 of the 20 States (Alaska, Illinois, Louisiana, Minnesota, Oklahoma, Pennsylvania, South Dakota and Virginia), the only bilingual

[1] P.L. 94-482, Section 110(b)(1).

vocational training programs that were identified in the inventory were funded under Subpart 3.

Table 1

Bilingual Vocational Training Programs and Classes,
By State and Type of Program
(As of Fall 1977)

State	Program Type[1]					
	Subpart 3		Non-Subpart 3		All Programs	
	Programs	Classes	Programs	Classes	Programs	Classes
Alaska	1	5	--	--	1	5
Arizona	--	--	7	12	7	12
California	3	5	39	98	42	103
Connecticut	--	--	1	5	1	5
Florida	1	2	7	18	8	20
Illinois	1	1	--	--	1	1
Louisiana	1	1	--	--	1	1
Maine	1	1	2	4	3	5
Massachusetts	--	--	6	24	6	24
Minnesota	--	--	1	3	1	3
New Jersey	--	--	2	7	2	7
New Mexico	1	4	3	33	4	37
New York	6	11	2	4	8	15
Ohio	--	--	1	1	1	1
Oklahoma	1	2	--	--	1	2
Pennsylvania	1	1	--	--	1	1
South Dakota	1	1	--	--	1	1
Texas	3	7	4	12	7	19
Virginia	1	3	--	--	1	3
Washington	--	--	1	2	1	2
TOTAL U.S.:	22	44	76	223	98	267

[1]"Program type," as used here and throughout the report, refers to whether a program is funded by Subpart 3 or other sources.

The 267 bilingual vocational training classes in operation in the Fall of 1977 enrolled an estimated 8,700 limited English-speaking trainees over the course of a year.

In general, bilingual vocational training programs are located in the States with the largest concentrations of persons of non-English language backgrounds.[1] Although this is a reasonable expectation because need for such training would exist in these States, factors other than need also determine where programs develop. Included are such factors as interest of local institutions or organizations in developing a bilingual vocational training program, and the ability to obtain funding for a planned program.

The Concept and Practice of Bilingual Vocational Training

Despite the fact that some programs have existed for several years, bilingual vocational training is an emerging concept that is not widely or commonly understood. Therefore, it is necessary to specify the conditions or criteria that must be satisfied by a program or course of occupational education for it to be considered as bilingual vocational training. Such criteria were developed based on the legislation, legislative intent and administrative regulations. The criteria are that any program, course or class must:

- Enroll persons 16 years of age or older who have completed or left elementary or secondary school;
- Provide training for gainful employment;
- Provide training or re-training on a group basis for semi-skilled or skilled occupations at the subprofessional level;
- Train persons who are non-English-speaking or have limited English-speaking ability and whose native language is not English;
- Provide some of the occupational skills training in both the native languages of the trainees and in English; and

[1] See Appendix A for a listing of States with the highest proportions of language minority persons.

- Provide language instruction (in the vocational class and/or a separate language class) to help trainees improve their ability to understand and use the English language.

Additionally, this study is limited to publicly funded bilingual vocational training programs.

Because bilingual vocational training is not widely understood, it is useful to distinguish it from related activities. Many misconceptions were encountered while conducting the inventory of bilingual vocational training programs. Some of the activities most commonly confused with bilingual vocational training were: bilingual basic education for adults; bilingual pre-vocational education; ESL instruction prior to or as an adjunct to occupational skills instruction; and provision of bilingual counseling, job placement and related services. Each of these activities may be part of a bilingual vocational training program, but none is bilingual vocational instruction.

Bilingual vocational training is not for bilingual persons, but rather for limited English-speaking persons whose native language is not English. Therefore, bilingual vocational training, as defined here, excludes training (whether conducted bilingually or not) for persons who know English and who are being prepared for a bilingual occupation.

The Congress defined "limited English-speaking" to include at least aural or listening comprehension as well as oral production, or speaking. The legislation recognizes a potential labor pool that is underutilized because of English language difficulties. Also recognized is the specific problem that limited English-speaking adults cannot participate in the mainstream of vocational education; that is, vocational training programs with monolingual instruction in English. Therefore, the Congressionally defined target group consists of unemployed or underemployed adults whose proficiency in English prevents them from benefiting from (indeed, understanding) vocational training conducted only in English.

Bilingual vocational training is an instructional approach with the dual goal of enabling trainees to (1) acquire marketable occupational skills, and (2) find and hold jobs in an English-speaking environment. To meet these goals, bilingual vocational training uses both the trainees' native language and English in the instruction. The dual rationale underlying bilingual vocational training is that adults with limited English-speaking ability (1) can learn some concepts best in their native language, but (2) need some degree of proficiency in English to find and perform jobs.

Bilingual vocational training for adults, according to the Congress, has the purpose of preparing limited English-speaking persons for work in English-speaking work environments. Such environments are, of course, predominant in this country. In some areas, however, non-English languages are prominent. These areas include, for example, many towns and cities near the Mexican border; sections in the Miami, Florida area; northern New Mexico and other areas of the Southwest; some Indian reservations; and many cities with enclaves of various groups who speak non-English languages. In these areas, some non-English language work environments exist and many work environments are bilingual in English and another language. Knowledge of English on the job may be important to a worker even in these areas and can enhance job mobility.

The majority of bilingual vocational training programs, and all of the Subpart 3 programs, operate on an annual funding cycle; therefore, the vocational training classes usually are designed so that trainees can meet skills acquisition objectives in no more than a year. The major exceptions to this rule are two-year bilingual occupational classes in community and junior colleges. These longer classes often are in occupations that require rather extensive knowledge of English, such as secretarial, medical technician and computer programmer. As discussed subsequently, classes with a duration of more than one year were excluded from this evaluation because there was insufficient time to obtain post-program data on the trainees in those classes.

The philosophy underlying the relatively short bilingual vocational training programs studied is that English language skills instruction is an integral part of the vocational training. This philosophy acknowledges that the resources for the program are limited and that the focus of English language instruction is to reinforce the vocational training as well as to prepare trainees for English-speaking work environments. It recognizes, further, that raising the general English language proficiency levels of very limited English-speaking adults may require extensive ESL instruction; far more extensive than is possible as part of a vocational training program.

ESL instruction for trainees in bilingual vocational training programs generally focuses on job-related English, which is feasible within the time constraints discussed above. Although there is some variation according to the occupations and institutions involved, the primary emphasis of the ESL instruction is on understanding and speaking English, rather than reading and writing. Coordination of the ESL and vocational skills instruction can help insure that the language skills taught are related to English needs of the occupation.

PLAN OF REPORT

Chapter II provides a brief description of the evaluation design, scope and limitations. Detailed design issues, methodology and procedures are presented in Appendices B and E.

The target group of bilingual vocational training and the characteristics of trainees are the subjects of Chapter III. That chapter contains information on demographic, socioeconomic and language characteristics of trainees and comparisons of those traits with other language minorities in the U.S. and with enrollees in other vocational training programs.

Chapters IV and V contain information describing the design and operation of bilingual vocational training. The discussion of Chapter IV

focuses on the setting of bilingual vocational training programs, their goals, planning procedures, occupational areas offered, supportive services, and operating problems. The characteristics of vocational and ESL instruction in bilingual vocational training programs are the subjects of Chapter V. The coordination and integration of vocational and English skills instruction also are covered in Chapter V.

Chapter VI contains a description of trainees' principal activities since leaving training as well as reasons for leaving the program.

Program outcomes (that is, pre-post program changes in trainees' labor force status) are the subject of Chapter VII. That chapter also contains discussions of trainee satisfaction with and reactions to their training.

Chapter VIII provides an analysis of post-program occupations held, correspondence of jobs to training received, English use on jobs, and demand and shortage factors in various occupations.

The final chapter contains conclusions, implications for policy, and suggestions for policy and operational changes to increase the effectiveness of bilingual vocational training.

II. SCOPE AND DESIGN OF EVALUATION

STUDY DESIGN[1]

The objectives of the evaluation, as set forth above, are concerned with determining what groups are served by bilingual vocational training programs, the types of occupational skills and English language instruction they receive, their satisfaction with and reaction to what they receive, and their labor market experience after completing training. The study is concerned also with the effects the programs may have on occupational skills shortages. A final concern of the evaluation is analysis of effects or outcomes in relation to program factors that can be controlled or influenced by program policy and administration.

To be responsive to the objectives, the design of the evaluation incorporated collection of data both from the trainees and from program officials. Information regarding program operations was collected during the Spring and Summer of 1978 in personal interviews with directors of bilingual vocational training programs, ESL instructors, and vocational skills instructors. A sample of trainees enrolled in bilingual vocational classes also was interviewed at that time. A follow-up survey included a second round of interviews with the same trainees; the program officials and instructors were not re-interviewed.

The evaluation design includes pre-program and post-program measures of the labor force status of trainees in bilingual vocational training. Labor force status was measured by the following variables: labor force participation rates, unemployment rates, job earnings, hours worked, industry of employment, and occupation. Information on these variables was collected for each trainee for both the 12-month period prior to entry into training, and a period subsequent to leaving training. The pre-program information was collected retrospectively from trainees during an initial

[1] See Appendix B for further detail.

interview while they were enrolled in vocational classes during the Spring and Summer of 1978. A second interview was held 9 to 13 months later (Spring and Summer of 1979) with the same trainees to obtain post-program information. At the time of the second interview, most of the trainees had been out of the training class for 8 to 11 months.

Measurements of English language proficiency were obtained during both of the interviews with trainees. The first and second measurements of English language proficiency have different purposes. The first, obtained while trainees still were enrolled in training, is used to classify the trainees according to their English proficiency at that time. The second is used to analyze the relationships between English proficiency and post-program labor force status. Pre-post measures were not obtained, and program impact on trainees' English proficiency cannot be determined.[1]

SAMPLE DESIGN

The evaluation is based on a probability sample of 718 trainees in 87 vocational classes in 38 bilingual vocational training programs. The basic sampling unit was the vocational skills class. (See Appendix B for a detailed explanation of the sampling plan.)

Prior to selecting the sample it was necessary to identify the universe of bilingual vocational training classes. As part of the program inventory conducted in 1977, 267 bilingual vocational training classes were identified throughout the nation. Classes were excluded from the sampling universe if they:

- Took longer than 52 weeks to complete because at the time of the follow-up survey many trainees still would be enrolled (30 classes)

[1] Pre-program English language proficiency measures were not possible because classes were ongoing at the time of the field work. Many classes were closed to new entrants. Other classes had open-entry policies for new trainees, but it was not feasible to wait for new entrants.

- Provided fewer than 20 hours of instruction in an occupational skill because the skill level required may be obtained without formal occupational training (4 classes)

- Had enrollment of fewer than one-third limited English-speaking trainees because bilingual instruction may not be provided systematically on a group basis (57 classes)

- Were in mental or correctional institutions, were visited during pre-tests for the study, or were not offered during the time of the field work for this study (89 classes).[1]

Trainees were sampled randomly from each of the remaining 87 bilingual vocational training classes. The probability of selection of trainees in any particular class was weighted so that the sample represents total annual enrollment of limited English-speaking trainees in the sample universe of classes. The 718 trainees sampled represented more than one-third of all limited English-speaking trainees enrolled at the time of the field work and about 13 percent of the estimated total enrollment of such persons throughout the entire year. The Subpart 3 program accounts for one-third of the classes (29) and about 23 percent of the sample trainees (167).

The lead vocational instructor was interviewed in 86 of the 87 sample classes. (The vocational instructor for one class was not available for an interview.) In some vocational classes, instructional duties were shared among two or more persons; therefore, more than one instructor was interviewed. A total of 110 vocational instructors are in the sample.

Interviews were conducted with each of the 38 program directors at the institutions and agencies operating the sample classes. Assistant directors also were interviewed at three programs to obtain data to supplement information provided by the directors.

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[1] Some classes that were expected to be operating were not, and the passage of Proposition 13 in California immediately prior to the field work resulted in additional closings.

A set of case studies was conducted of the relationships between bilingual vocational training and ESL instruction in 25 programs. These programs were selected because of prima facie evidence of coordinated bilingual occupational training and ESL instruction. The case studies focused primarily on the coordination and relationships of vocational and ESL instruction, and only secondarily on ESL methods.

SCOPE AND LIMITATIONS OF EVALUATION

The evaluation is designed to represent all bilingual vocational training classes throughout the nation. Because of cost limitations, it was not possible to study classes that were not open during the field work period. The classes that were omitted for that reason included trainees of some language groups that are not well represented in the sample, particularly French, Russian, and Portuguese.

As noted earlier, before-and-after (pre-post) measures are available for trainee labor force status indicators but not for English language proficiency measures. Therefore, pre-post changes in English language proficiency cannot be determined.

Efforts were made during the design of this evaluation to identify a comparison group in order to determine the net effects of bilingual vocational training on labor force status. These efforts included investigation of the feasibility of a comparison group as part of field pre-test visits. These investigations revealed that no valid comparison group exists. Adults who are not in vocational training are an inappropriate comparison group because they are likely to have different skills and motivations than persons who are in training. Trainees enrolled in vocational programs that are not taught bilingually are unlikely to be limited English-speaking and, therefore, would not be comparable to trainees in the bilingual vocational programs. Comparisons are made in this study of the effects on trainees of different types of training and services received from bilingual vocational training programs.

Bilingual vocational training programs change considerably from year to year. These changes are attributable to many factors, such as loss of funding by a program sponsor, new funding received by an institution, addition of a language target group, change of occupational areas offered, and so on. Although the programs and classes sampled for this evaluation are a reasonable representation of bilingual vocational training as it existed in 1978, that year may not have been typical in every way. However, the information presented in this report is far more comprehensive and reliable than any available to date and, with appropriate application, will provide sound guidance for policy and program decisions.

III. THE TARGET GROUP AND TRAINEE CHARACTERISTICS

INTRODUCTION

The target group of potential enrollees for bilingual vocational training programs is much more diverse than persons who were actually receiving such training in 1978. Since only very limited resources have been devoted to bilingual vocational training (in relation to all vocational education), such programs have not necessarily developed in proportion to need throughout various areas of the country and among the different non-English language groups.

The discussions in this chapter focus on the target group for adult bilingual vocational training, characteristics of trainees in such programs, and comparisons of these two groups.

THE TARGET GROUP

As discussed in the first chapter, the target group for bilingual vocational training, as defined by the Congress in the Part J and Subpart 3 legislation, consists of persons who are:

- non-English-speaking or limited English-speaking and have a non-English native language,
- 16 years of age or older and out of elementary or secondary school,
- unemployed or underemployed, and
- in need of acquiring new job skills or upgrading existing skills.

Although the programs that are not funded under Subpart 3 have not necessarily designated formal target groups, the focus appears to be similar among all of the programs.

Very little reliable information exists regarding the size and nature of the target group for bilingual vocational training. Considerable data are now available on the numbers of persons with backgrounds in various languages, but the numbers of limited English-speaking persons can be estimated only roughly.[1]

According to data from the Survey of Income and Education conducted in Spring 1976, more than 20 million persons 19 years old or over in the United States were of non-English language backgrounds.[2] About 80 percent of these persons have a European language background. Nearly 40 percent of that group (and about 30 percent of the total) are of Spanish language background--the largest language group. Persons of Asian language backgrounds account for about 6 percent of the total. (See Table 2.) These survey estimates do not reflect entirely the recent influx of Southeast Asians, particularly Vietnamese, to the U.S.

Estimates from the Survey of Income and Education indicate that about 60 percent of all language minority persons 19 years of age and older were born in the United States (or Puerto Rico). Only about 20 percent of persons of Chinese language background and about 30 percent of persons of other Asian language backgrounds were born in the U.S. (Appendix C).

Estimates of the current need or demand for bilingual vocational training are impossible because the numbers of limited English-speaking persons are not known. Trends in the need for bilingual vocational training also are very difficult to project because many imponderable

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[1] More than 2.1 million persons 19 years of age and older spoke only non-English languages in 1976. All or nearly all of these persons are probably of limited English-speaking ability. See Dorothy Waggoner, "Non-English Language Background Persons: Three U.S. Surveys," TESOL Quarterly, XII (September 1978), 247-262. An additional several million people usually speak non-English languages, and some proportion of that group is limited English-speaking.

[2] Persons whose native language, or mother tongue, is not English, regardless of language usually spoken.

Table 2

Distribution of Persons 19 Years of Age and Older
of Non-English Language Background in the United States,
by Language Group,
Spring 1976

Language Group	Number (in thousands)	Percent of Total
All Non-English Languages	20,730	100.0
Selected European Languages	16,446	79.3
Spanish	6,203	(29.9)
Other European (French, German, Greek, Italian, Polish, Portuguese, Russian, Scandinavian languages, Yiddish)	10,243	(49.4)
Selected Asian Languages	1,321	6.4
Chinese	339	(1.6)
Vietnamese	74	(.4)
Other Asian (Filipino, Japanese, Korean)	908	(4.4)
Navajo	83	.4
Other languages	2,881	13.9

Source: Dorothy Waggoner, "Non-English Language Background Persons: Three U.S. Surveys," TESOL Quarterly, XII (September 1978), 247-262.

factors are involved, such as immigration policy and educational policies and practices. Generally, as educational levels in U.S. schools rise, English proficiency levels also will rise. Reported levels of educational

attainment, however, should be interpreted cautiously. A recent analysis of data from the Survey of Income and Education indicates that children of minority language backgrounds are disadvantaged on two important measures: grade attainment-for-age and dropout rate.[1] Not all of these persons have limited English-speaking ability, of course, but some may be candidates for bilingual vocational training as they become adults.

TRAINEE PROFILE

General

Trainees in bilingual vocational training programs in 1978 differed substantially in some respects from enrollees in other adult vocational education programs. These differences are not unexpected since limited English-speaking adults cannot be served properly by "regular" vocational training programs. As shown in Table 3, there is a very considerable difference in levels of schooling between trainees in bilingual vocational programs and in other programs. Nearly 90 percent of enrollees in vocational schools had completed 12 or more years of school; a proportion much higher than the general population and twice as high as persons in bilingual vocational training. (As discussed later, educational levels of bilingual vocational trainees are even lower if only U.S. schooling or English schooling are considered.)

Women were more frequently enrolled in bilingual vocational programs than in other vocational programs; about 60 percent of all enrollees compared to about 50 percent. Age distributions for bilingual and regular

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[1] Children of minority language backgrounds enrolled in grades 5-12 in 1976 were much more likely than other persons to be two or more grade levels below the grade levels expected for their ages. This disparity increased when a non-English language was usually spoken. Persons of minority language background who usually spoke Spanish had a dropout rate 4 times as high as persons of English language background. National Center for Education Statistics, "The Educational Disadvantage of Language-Minority Persons in the United States, Spring 1976," NCES Bulletin 78-121, July 26, 1978.

Table 3

Age, Sex and Years of School Completed for Adults Enrolled in All Vocational Schools and in Bilingual Vocational Training Programs
(percentage distributions)

Sex, Age and Years of School Completed	Total Population 14 Years Old and Over October 1976	Enrollees in Vocational Schools, October 1976[1]	Trainees in Bilingual Vocational Training Programs Spring - Summer 1978		
			All Programs	Subpart 3	Non-Subpart 3
SEX	100.0	100.0	100.0	100.0	100.0
Male	47.4	50.3	39.7	41.3	39.3
Female	52.6	49.7	60.3	58.7	60.7
AGE					
Both Sexes:	100.0	100.0	100.0	100.0	100.0
14 - 21 Years Old	20.0	20.6	17.6	20.4	16.7
22 - 34 Years Old	26.0	45.9	44.7	49.1	43.5
35 Years Old and Over	54.0	33.5	37.7	30.5	39.8
Female:	100.0	100.0	100.0	100.0	100.0
14 - 21 Years Old	19.2	24.1	17.1	21.4	15.9
22 - 34 Years Old	25.5	40.2	42.8	49.0	41.0
35 Years Old and Over	55.3	35.7	40.1	29.6	43.1
Male:	100.0	100.0	100.0	100.0	100.0
14 - 21 Years Old	20.9	17.0	18.3	18.8	18.1
22 - 34 Years Old	26.6	51.6	47.7	49.3	47.2
35 Years Old and Over	52.5	31.4	34.0	31.9	34.7
YEARS OF SCHOOL COMPLETED	100.0	100.0	100.0	100.0	100.0
Less than 12 Years	39.0	10.5	56.3	52.1	57.5
12 Years and Over	61.0	89.5	43.7	47.9	42.5

Sources: For total population and all vocational schools -- U.S. Bureau of the Census, Vocational School Experience: October 1976, Current Population Reports, Series P-20, No. 343, September 1979; for bilingual vocational training programs -- Kirschner Associates, Inc., sample survey, Spring - Summer 1978. This latter source and the follow-up survey in Spring - Summer 1979 provide all the data in this and subsequent tables for bilingual vocational training, unless otherwise noted.

[1] About 80 percent of these persons were in an occupational skills program.

vocational program enrollees were only slightly different, with the bilingual programs enrolling proportionately fewer people 21 years of age and under. The bilingual programs also enrolled comparatively more persons 35 years of age and older, but these age differences were minor.

In general, differences between enrollees in bilingual and other vocational programs were somewhat greater than the differences between the two types of bilingual programs (Subpart 3 and other). One of the major differences between enrollees in Subpart 3 and the other bilingual programs is the relative preponderance of women 35 years and older (and, conversely, fewer women 21 years and under) in the non-Subpart 3 programs.

Table 4 on the following page provides a summary of basic characteristics of trainees in bilingual vocational training and comparison of enrollees in Subpart 3 programs with those in programs funded by other sources. These characteristics are discussed in the sections following. Additional detailed trainee characteristics are provided in Appendix D.

Language Background and Country of Birth

Persons of Spanish language background are the largest group enrolled in bilingual vocational training progams (nearly three-fourths of the total), and persons with a Chinese language background are the second most numerous (about 12 percent of the total). The language groups and the percentages of trainees, by program type, in each are shown in Table 5.

The "other" group includes these languages, in descending order of frequency: Vietnamese, Navajo, Sioux, Korean, Italian, Burmese, Tagalog, and Russian. Additionally, each of the following languages was represented by one person: Armenian, Cambodian, Lebanese, Polish, Portuguese, Roumanian, Thai, and Urdu. Some persons in the "other" group claimed two native languages, either English and a non-English language or two non-English languages. As noted earlier, slightly different timing of the study would have included persons of French language background and perhaps a few others, as well as additional persons of Russian and Portuguese language background.

Table 4

Selected Demographic and Educational Characteristics of Trainees in Bilingual Vocational Training Programs, Spring - Summer 1978

Characteristic	All Trainees (n=718)	Subpart 3 (n=167)	Non-Subpart 3 (n=551)
Mean Age	33.3	31.3	33.9
Percent Male	39.7	41.3	39.3
Years of School Completed (mean)	10.2	10.6	10.1
Years of School Completed in U.S. (mean)	2.9	2.4	3.0
Percent Spanish Mother Tongue	74.1	49.1	81.7
Percent Chinese Mother Tongue	11.7	28.1	6.7
Percent Foreign Born	82.0	79.6	82.7
Mean Number of Years Lived in U.S. (for foreign born)	7.6	5.1	8.3
Percent with Prior Vocational Training	27.9	28.1	27.8
Percent Married	50.2	52.7	49.5
Percent Head of Household	43.8	29.3	48.2

Table 5

Percentage Distribution of Trainees' Mother Tongue by Program Type

Mother Tongue	Program Type		
	Subpart 3 (n=167)	Non-Subpart 3 (n=551)	Both Types (n=718)
English	1.2	5.4	4.5
All Non-English Mother Tongues:	98.8	94.6	95.5
Spanish	(49.1)	(81.7)	(74.1)
Chinese	(28.1)	(6.7)	(11.7)
Other	(21.6)	(6.2)	(9.7)
All Mother Tongues	100.0	100.0	100.0

A small number (4.5 percent) of the trainees reported that their mother tongue is English. Bilingual vocational training, as noted earlier, is not designed to serve native English speakers. All trainees in the sample, however, were selected randomly from among those trainees designated as limited English-speaking by their vocational instructors. (See Appendix B for a complete discussion of the sampling procedure.)

Foreign-born trainees are predominant in bilingual vocational training programs; only 18 percent were born in the United States. About 80 percent of the foreign born are from Spanish-speaking countries. The major group is Cuban (about 48 percent of the trainees from Spanish-speaking countries, 38 percent of all foreign born, and 31 percent of all trainees).[1] The other Spanish-speaking countries of birth are Mexico (about 12 percent of all trainees), Puerto Rico (about 7 percent of the total),[2] and several Central American and South American countries. Asian countries, primarily those in which Chinese is spoken, represent nearly one-sixth of all trainees. Native Americans, who are, of course, U.S. born, comprise about 3 percent of the trainees.

Trainees in bilingual vocational training programs do not represent the various minority language groups proportionately. The two major language groups in bilingual vocational training programs (Spanish and Chinese) are enrolled in greater numbers than their incidence in the U.S. population. (See Table 2, page 19.) Persons of Chinese language background are overrepresented substantially in such programs; they represent less than 2 percent of all persons in the U.S. of minority language background and about one-eighth of the trainees. Persons of Spanish language background also are overrepresented (about 30 percent of language minority adults in the U.S. and about three-fourths of bilingual vocational trainees).

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[1] Considerable bilingual vocational training has been provided in areas where Cuban-born persons live. The two largest programs studied primarily served Cuban-born trainees.

[2] Trainees born in Puerto Rico are counted as foreign born because Spanish is the usual language.

In comparison with other persons of minority language background in the U.S., considerably more bilingual vocational trainees are foreign born (See Appendices C and D). The foreign-born trainees in bilingual vocational training programs have lived in the U.S. an average of 7.6 years. The Subpart 3 programs enrolled more recent emigrés than the other programs; the mean length of residence in the U.S. for foreign-born Subpart 3 trainees was 5.1 years (Table 4).

Substantial differences exist also between the origins of persons of Spanish language background in the general population and in bilingual vocational training programs. Cubans represent only about 6 percent of all persons in the country of Spanish language background, but nearly half of that same group in bilingual training programs. Also, only about 15 percent of persons of Spanish language background in the training programs are Mexican, although they account for 60 percent of persons in the nation with Spanish language background. Enrollment of Puerto Ricans, Central Americans and South Americans in bilingual vocational training programs is in fairly close accord with their incidence among all persons of Spanish language background.

Age, Sex and Marital Status

Proportionately more females are enrolled in bilingual vocational training programs than in regular vocational programs. (See Table 3, page 21.) Age distributions of trainees are not substantially different for bilingual and regular vocational programs.

Table 6 provides age-sex distributions of bilingual vocational trainees for each language group. Females 35 years old and over comprise the largest group (about one-fourth of all trainees), and females under 25 years old (one-fifth) are the next largest. The large number of females 35 years and over is influenced by the high percentage of trainees from Cuba in that group. About three-fourths of all Cuban-born trainees are female and more than 60 percent of them are 35 years or over (Table D-1, Appendix D). Women trainees were most prevalent among the Central

American-born (84 percent), and about 40 percent of them were under 25 years of age. As shown in Table 6, Chinese men are overrepresented in the 35-year-and-over age category. (As shown in Table D-1, Appendix D, Cuban-born trainees have the next highest proportion of older men enrolled in bilingual vocational training programs.)

Table 6

Percentage Distribution of Trainees
By Sex and Age, By Mother Tongue

Sex And Age Group	Mother Tongue					
	English (n=32)	All Non-English Mother Tongues (n=685)	Spanish (n=532)	Chinese (n=84)	Other (n=69)	All Mother Tongues (n=717)
Male:						
Under 24	40.6	11.2	11.1	8.3	16.0	12.6
25-34	9.4	13.9	11.1	31.0	14.5	13.7
35 or over	0.0	14.2	13.0	22.6	13.0	13.5
All age groups	50.0	39.3	35.2	61.9	43.5	39.8
Female						
Under 24	43.8	18.4	19.9	7.1	20.3	19.5
25-34	3.1	17.2	16.7	14.3	24.6	16.6
35 or over	3.1	25.1	28.2	16.7	11.6	24.1
All age groups	50.0	60.7	64.8	38.1	56.5	60.2
Both Sexes:						
Under 24	84.4	29.6	31.0	15.5	36.2	32.1
25-34	12.5	31.1	27.8	45.2	39.1	30.5
35 or over	3.1	39.3	41.2	39.3	24.7	37.6
All age groups	100.0	100.0	100.0	100.0	100.0	100.0

In both the Spanish and Chinese language groups, about two-fifths of the trainees are 35 years of age or older. The Chinese are underrepresented in the youngest age group, however; only 15 percent of the Chinese were under 25 years of age. Almost three-fifths of the U.S.-born trainees were under 25 years of age--more than twice the proportion of the foreign born. Puerto Rican-born and Mexican-born trainees were more likely to be in the youngest age groups than were other foreign-born trainees.

Slightly more than half of the trainees were married, and about 40 percent were heads of households. About three-fifths of the males were household heads, compared to nearly one-third of the females. A substantially lower proportion of trainees in the Subpart 3 programs (29 percent) were heads of households than in the other bilingual vocational programs (48 percent).

Educational Attainment

As shown in Table 3, more than two-fifths of the trainees in bilingual vocational programs had completed at least 12 years of school, including schooling in foreign countries and in which the medium of instruction was a non-English language. Moreover, about 84 percent had completed more than 6 years of total schooling; the mean number of years of school completed was 10.2.

When considering only U.S. schooling or English schooling (schooling in which the medium of instruction was English, regardless of country), a very different picture of educational attainment is obtained. More than half of the trainees had no years of U.S. or English schooling, and about three-quarters had completed no more than 4 years of U.S. or English schooling (Table 7). The remaining trainees, who had completed higher levels of U.S. or English schooling, were, nevertheless, judged by their vocational instructors as having difficulty understanding instruction in English.

Table 7

Percentage Distribution of Trainees' Total Years of Education, Years of U.S. Education, and Education in English, By Program Type

Years of Education	Program Type		
	Subpart 3	Non-Subpart 3	All Programs
Total years of foreign and U.S. education:	(n=167)	(n=551)	(n=718)
0-6	13.8	16.9	16.2
7-9	17.4	21.2	20.3
10-11	21.0	19.4	19.8
12 or more	47.8	42.5	43.7
TOTAL	100.0	100.0	100.0
Total U.S. education:	(n=167)	(n=550)	(n=717)
0	62.3	56.0	57.5
1-2	13.8	11.5	12.0
3-4	2.4	5.3	4.6
5-6	3.0	4.0	3.8
7-9	3.0	7.3	6.4
10-11	7.2	6.7	6.8
12 or more	8.3	9.2	9.1
TOTAL	100.0	100.0	100.0
Total English schooling:	(n=167)	(n=541)	(n=708)
0	59.3	53.0	54.5
1-2	12.0	11.5	11.6
3-4	3.6	6.8	6.1
5-6	4.8	4.4	4.5
7-9	4.2	7.2	6.5
10-11	7.1	7.2	7.2
12 or more	9.0	9.7	9.6
TOTAL	100.0	100.0	100.0

There were only minor differences between the educational attainment levels of trainees in Subpart 3 projects and those in other programs. Subpart 3 trainees had slightly lower levels of U.S. and English schooling, but slightly higher levels of total schooling.

As shown in Appendix D, trainees in the higher age groups had lower levels of educational attainment than younger persons; Mexican trainees had relatively low years of education, while Cubans and Puerto Ricans were at relatively high levels. More than three-fourths of the Chinese had no U.S. education or schooling in English.

Prior Vocational Training

Approximately one-fourth of the trainees had received occupational training prior to entering the bilingual vocational classes, and about four-fifths of these persons had completed their prior training. About 40 percent of those who had prior training attended vocational classes in a foreign country.

Pre-Program Labor Force Status

During the week prior to their entry into the bilingual vocational training classes, the labor force status of the trainees was as follows:

- The labor force participation rate (proportion of all persons either working or seeking work) was 62.8 percent;
- The unemployment rate (proportion of those in the labor force who were not employed and were seeking work) was 33.9 percent.

Of those persons who were not in the labor force, about 45 percent were in school or training courses and the remainder were unable or preferred not to work or look for work (Table 8). The high unemployment rate immediately prior to program entry (33.9 percent) is typical of groups entering training programs since the persons may not be employable or may bypass jobs to enter training.

Nearly 40 percent of the trainees did not work at all during the year prior to entry. More than one-fourth (28 percent) were not in the labor force during that year; that is, they neither worked nor sought

Table 8

Trainees' Activities and Labor Force Status
During the Week Prior to Program Entry

Activity and Status	Percent (n=716)
(1) Working	41.5
(2) Not Working	58.5
(a) School	(13.7)
(b) Training	(3.1)
(c) Seeking Work	(21.3)
(d) Other	(20.4)
(3) Total	100.0
Labor Force Participation Rate (1) + (2c)	62.8
Unemployment Rate (2c) ÷ [(1) + (2c)]	33.9

work. Nearly one-eighth of the trainees had never worked, and, of those who had worked, about two-thirds had no more than 5 years experience in their usual occupations.

Overall, the trainees spent 58.2 percent of the entire year in the labor force. Of the time spent in the labor force, 23.3 percent was spent unemployed and seeking work. Trainees in Subpart 3 programs experienced slightly more unemployment than other trainees during the year prior to program entry (Table D-56, Appendix D). Pre-program unemployment was much higher for females than males. Trainees of Chinese language background had relatively low unemployment during the year prior to training.

About one-third of the trainees who had worked during the year prior to program entry earned less than $110 weekly on their most recent job.

(The hourly minimum wage at that time was $2.65 or $106 for a 40-hour week.) Persons in the lowest earnings category included some who worked part-time.

Fewer than 30 percent (28.9 percent) of the trainees earned $160 or more weekly ($4.00 per hour for a 40-hour week) prior to entering the program. Persons with Chinese as a mother tongue had the lowest pre-training earnings; nearly half of those trainees earned less than $110 weekly on their last pre-program job and only about one-seventh of them earned $160 or more per week.

English Language Proficiency and Usage

This study assessed trainees' English speaking ability and listening comprehension.[1] Two measures were used:

1. Measure of English Language Proficiency (MELP), a self-report (indirect measure);[2] and
2. The Ilyin Oral Interview (IOI), a structured, picture-controlled oral interview (direct measure).[3]

Both of these measures have been tested on and can be used to classify English proficiency levels of adults with limited English-speaking ability, and both are easily administered by trained interviewers on an

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[1] Because reading is usually not emphasized in bilingual vocational training programs, little effort was devoted to measuring reading proficiency; however, one indirect measure (self-report) was used.

[2] MELP rating scales were developed and tested by the Center for Applied Linguistics. W. Stolz and M. Bruck, A Project to Develop a Measure of English Language Proficiency: Final Report; A Report submitted to the National Center for Education Statistics. (Arlington, Virginia, 1976).

[3] The Ilyin Oral Interview provides a combined measure of understanding and speaking English. Scores, ranging from 0-100, are based on both the appropriateness of content of responses and on the accuracy of English grammar. Donna Ilyin, Ilyin Oral Interview. Newbury House Publishers, Inc. Rowley, Massachusetts, 1976.

individual basis. The results of the two measures do not differ greatly and only the self-reported ratings (MELP) are presented in the text.[1]

English Proficiency Levels of Trainees

The English language proficiency of trainees was measured after they had been enrolled in training for varying lengths of time. Therefore, the MELP classifications presented here do not refer to pre-training proficiency levels. Some trainees had been enrolled for only a short time, while others were near the end of their classes. About half of the trainees appeared to be within a few weeks of finishing their training; therefore, the English language proficiency levels presented here probably are somewhat higher than upon program entry.

MELP consists of a 5-point scale, ranging from "Not at All" to "Very Well," that assesses separately proficiency in speaking and understanding.

As expected, trainees reported higher proficiency levels in listening comprehension than in speaking because of how language is learned: understanding precedes a person's ability to produce the appropriate sounds, vocabulary, and grammatical structures of a language.

A substantial number of trainees (about 42 percent) reported that they did not understand spoken English well, while more than half (about 52 percent) reported that they did not speak English well (Table 9). An additional 3.5 percent of the trainees said that they did not understand spoken English at all, while more than twice as many (7.4 percent) reported that they could not speak English at all.

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[1] See Appendices E and F for a full discussion of both the MELP and the IOI and a comparison of results of the two measures. The results are very similar for both measures although there is some indication that some persons with very low English proficiency may over-rate themselves on the MELP.

TABLE 9

Percentage Distribution of Trainee MELP Understanding and Speaking Ratings by Mother Tongue

MELP Rating	Mother Tongue											
	English		All Non-English Mother Tongues		Spanish		Chinese		Other		Total All Mother Tongues	
	MELP Understand (n=32)	MELP Speaking (n=32)	MELP Understand (n=686)	MELP Speaking (n=684)	MELP Understand (n=532)	MELP Speaking (n=530)	MELP Understand (n=84)	MELP Speaking (n=84)	MELP Understand (n=70)	MELP Speaking (n=70)	MELP Understand (n=718)	MELP Speaking (n=716)
Not at All	0.0	0.0	3.6	7.7	2.5	5.7	14.3	25.0	1.4	2.9	3.5	7.4
Not Well:	0.0	0.0	43.6	54.5	45.3	58.0	50.0	50.0	22.9	34.2	41.6	52.1
- Just a few words	(0.0)	(0.0)	(21.3)	(21.3)	(21.8)	(23.8)	(25.0)	(17.9)	(12.9)	(7.1)	(20.3)	(20.4)
- More than a few words	(0.0)	(0.0)	(22.3)	(33.2)	(23.5)	(34.2)	(25.0)	(32.1)	(10.0)	(27.1)	(21.3)	(31.7)
Well	28.1	34.4	37.0	27.6	35.3	25.3	29.8	25.0	58.6	48.6	36.7	27.9
Very Well	71.9	65.6	15.8	10.2	17.1	11.0	5.9	0.0	17.1	14.3	18.2	12.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

About one in five of the trainees rated their English comprehension "Very Well," as opposed to only one in eight for their English-speaking ability.

The Chinese language group, on the average, had the lowest English proficiency levels. Only about 35 percent of the trainees of Chinese language background rated themselves at least "Well" on understanding English, and only 25 percent on speaking English. Moreover, none of the Chinese speakers indicated that (s)he could speak English "Very Well," while one-fourth said they could not speak English at all.

In the Spanish language group, about half of the trainees rated their comprehension ability as "Not at All" or "Not Well," and nearly two-thirds reported their speaking ability to be at these levels. Only about 5 percent of the trainees of Spanish language background said that they could not speak English at all.

Several factors may account for the generally lower levels of English aural/oral proficiency for persons of Chinese language background. The limited amount of contact with English that this group has had is shown by the mean number of years that the Chinese speakers have lived in the U.S. (2.8), as compared with 8.9 for Spanish speakers, and the average number of years of English schooling (0.8), as compared with 2.7 for Spanish speakers. In addition, structural features of Chinese inhibit the acquisition of English; Chinese is a tonal language, has a different type of writing system, and uses characters to represent ideas, not sounds. Cultural factors, including the preference to use Chinese as the primary means of communication and the relative lack of opportunity to use English, also may contribute to the lower levels of aural/oral English proficiency.[1]

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[1] English reading proficiency levels for this group are only slightly lower than for persons with other non-English mother tongues. See Appendix F.

Language Usage

Non-English languages were the primary means of communication for approximately three-fourths of the trainees (Table 10). All of the trainees of Chinese language background usually spoke Chinese (including one who reported both Chinese and English as a usual language). About three-fourths of the Spanish language group and nearly three-fifths of the "other" languages group spoke a non-English language.

Table 10
Percentage Distribution of Trainee Usual Languages by Mother Tongue

Usual Language	Mother Tongue				
	English (n=32)	Spanish (n=531)	Chinese (n=84)	Other (n=70)	Total All Mother Tongues (n=717)
English	81.2	11.1	0.0	31.4	14.9
Non-English	0.0	75.1	98.8	58.6	73.0
Both English and Non-English	18.8	13.8	1.2	10.0	12.1
TOTAL	100.0	100.0	100.0	100.0	100.0

Many factors may account for use of one's native language instead of English. Exposure to and need for English are obvious factors. Persons who live and work in communities where non-English languages are prevalent will have less need for English than persons in areas where English

is dominant. Proficiency in English and educational levels also may influence how often a person uses English. Certainly, the language knowledge and preference of the communicants as well as the situation are important in language use. As shown in Table D-53, Appendix D, the trainees' usual language varies substantially by language group as well as by the communication situation and the participants.

SUMMARY AND CONCLUSIONS

Trainees in bilingual vocational training programs differ in many respects from the U.S. population of language minority persons; that is, persons with a native language other than English. The target group of bilingual vocational training--limited English-speaking adults--is a subgroup of language minorities. Because data on the numbers and characteristics of limited English speakers are not available, it is not known whether bilingual vocational trainees are representative of the target group. In view of the limited size of the bilingual vocational training effort to date and keen competition for available funds, it is doubtful that enrollment of the various language groups is proportionate to the needs of each group.

In relation to all adults with a non-English language background in the U.S., bilingual vocational training programs in 1978 overrepresented persons of Spanish and Chinese language backgrounds. Bilingual vocational training programs also enrolled much higher proportions of foreign-born persons than are found among all language minority persons in the U.S. More than 8 out of every 10 bilingual vocational trainees were born abroad if persons born in Puerto Rico are counted as foreign born and 75.5 percent if such persons are counted as U.S. born.

Persons of Spanish language background comprised about three-fourths of all trainees in bilingual vocational training programs in 1978, compared to about 30 percent of persons of all non-English language backgrounds in the U.S. In the bilingual vocational training programs funded

nationally (Subpart 3), persons of Spanish language background, although the largest group, accounted for only about 50 percent of all trainees. (During both prior and subsequent years, persons of Spanish language background comprised higher proportions of the total number of Subpart 3 trainees than in 1978.)

Persons of Cuban origin appeared among bilingual vocational trainees about 8 times as often as in the U.S. population of persons of Spanish language background. Conversely, persons of Mexican origin were enrolled in bilingual vocational training programs at only one-fourth the rate at which they appeared among all persons of Spanish language background in the U.S. Puerto Ricans, Central Americans and South Americans were enrolled in bilingual vocational training programs in close proportion to their numbers among persons of Spanish language background in the U.S.

Nearly 12 percent of trainees were of Chinese language background, an incidence more than 7 times as great as in the U.S. population of all language minorities. More than one-fourth of the trainees in the Subpart 3 programs were of Chinese language background.

Trainees in bilingual vocational training programs differed from persons enrolled in regular vocational programs on a number of dimensions. Women comprised a considerably higher proportion of enrollment in bilingual vocational training than in regular programs (60 percent vs. 50 percent). Age distributions of trainees were comparable in bilingual and regular vocational training, although, on average, trainees in the bilingual programs were slightly older.

The most substantial difference between trainees in bilingual vocational programs and those in regular vocational programs is in educational attainment. About 90 percent of enrollees in regular vocational programs had completed 12 years or more of school, while about 44 percent of trainees in bilingual vocational training had that much education. Much of the education of the limited English-speaking trainees was received in foreign countries, and for the most part the medium of

instruction was a non-English language. Although the mean number of years of school completed for trainees in bilingual vocational training was more than 10, the mean level of education in the U.S. (and of total English education) was only about 3 years. Thus, trainees in bilingual vocational training programs have somewhat lower total educational levels than enrollees in regular vocational training, but drastically lower educational attainment if only U.S. or English education is considered.

More than 40 percent of the trainees in bilingual vocational training programs reported that they did not understand spoken English well, while more than 50 percent reported that they did not speak English well. Only about 1 in 5 of the trainees rated their English comprehension "Very Well," and only 1 in 8 rated their English speaking that high. About 1 in 13 could not speak English at all. The trainees of Chinese language background had the lowest English proficiency levels. One-fourth of the Chinese speakers could not speak English at all and none could speak English "Very Well." Among the trainees of Spanish language background, nearly two-thirds said that they could not speak English well. English language proficiency levels of the trainees were lower, of course, prior to program entry, but it was impossible to obtain measurements until after enrollment.

Non-English languages were the primary means of communication for about three-fourths of the trainees. All of the trainees of Chinese language background usually spoke Chinese. Spanish was the usual language of about three-fourths of the Spanish language group, and nearly three-fifths of the trainees with a native language other than Chinese or Spanish usually spoke a non-English language.

About 40 percent of the trainees in bilingual vocational programs did not work at any time during the year prior to entry, and immediately prior to entry nearly 60 percent were not working. Nearly one-eighth of the trainees had never worked, and of those who had, about two-thirds had no more than 5 years experience in their usual occupations.

Unemployment rates were high for those trainees who were in the labor force. The average unemployment rate for all trainees over the entire year prior to program entry was 23.3 percent, and 33.9 percent during the week immediately prior to entry.

About one-third of the trainees who worked during the year prior to program entry earned no more than about the minimum wage level ($106 per week), while only slightly more than one-quarter of them earned more than $160 per week.

Bilingual vocational training programs generally enrolled persons who could profit potentially from the training; that is, persons who lack both marketable job skills and English language proficiency. The trainees, with few exceptions, appeared to meet the target group of unemployed or underemployed limited English-speaking adults as defined by the Subpart 3 legislation, in programs funded either by Subpart 3 or other sources.

IV. PROGRAM DESIGN AND OPERATION

INTRODUCTION

Bilingual vocational training programs share some goals and operating features of all vocational programs. Because of the limited English-speaking clientele, bilingual vocational programs also have some unique aspects, such as integration of vocational and English language instruction. This chapter explores the settings, objectives, planning, occupational offerings, operation and services of bilingual vocational training programs. The next chapter contains an examination of occupational skills and ESL instruction.

THE SETTING

Program Locations

As noted in Chapter I, 98 bilingual vocational training programs of all types and lengths were operating in 20 States in late 1977. The 38 programs included in this evaluation are located in 14 States, including 5 in the West and Southwest, 3 in the Midwest, 4 in the Northeast, and 2 in the Mid-Atlantic and Southeast regions. The programs studied represent accurately the locations of bilingual vocational training programs, indicating their considerable geographic dispersion.

The 38 programs are located in 23 labor areas,[1] including several of the largest metropolitan areas and some of the least populated towns

[1] "Labor areas," as defined by the U.S. Department of Labor, refer to areas within which most persons both work and live; that is, such areas usually include both job centers and places of residences of workers in those centers and workers beyond commuting distance would be in another labor area. Labor areas often are synonomous with Standard Metropolitan Statistical Areas.

and rural areas in the nation. These areas include major entry and settlement points for recent emigrés from various countries as well as established communities of language minorities who are natives of both the U.S. and other countries. Two of the sample programs were on Indian reservations.

The areas served by the programs represent a variety of local economic conditions. Unemployment rates for these areas during 1977 (when most of the sample trainees entered the programs) ranged from a high of 16.3 percent to a low of 4.5 percent. In 12 of the 23 areas, the local unemployment rate was above 6.5 percent, the national unemployment rate for the same period.

Operating Institutions

Bilingual vocational training programs are operated by a variety of types of institutions. The distribution of operating institutions for the 38 programs studied is as follows:

Community colleges, community college districts or junior colleges:	13
Local education agencies:	12
Community organizations:	7
Skills training centers:	4
State Education Agency:	1
University:	1
Total:	38

More than one-fourth of the programs were operated by community organizations and skills centers; that is, by nontraditional educational organizations. The community organizations include minority language group organizations, and the skills training centers include funding from or linkages with other employment and training programs or employers.

The institutions funded under Subpart 3 had considerably less experience operating bilingual vocational training programs than did those funded from other sources. Nearly two-thirds of the non-Subpart 3

operating institutions (14 of 23), compared to only 1 of the 15 Subpart 3 institutions, had more than 5 years experience with bilingual vocational training for adults. Only two programs (both non-Subpart 3) had more than 10 years experience.

Funding for bilingual vocational training programs was provided through various sources, including, of course, Subpart 3 for some programs. State and local vocational education funds provided the bulk of funding for the other progams although other sources were utilized as available. As discussed later in this chapter, various financial and nonfinancial arrangements with related organizations have been developed for provision of program services.

PROGRAM OBJECTIVES

Bilingual vocational training programs share the broad goal of all vocational education programs; that is, to provide workers with job skills thereby increasing the supply of skilled labor and preparing the workers for specific occupations. Indeed, all but 1 of the 38 program directors indicated that an objective was to prepare limited English-speaking trainees to be job-ready upon completion of training.

In addition to preparing trainees to be job-ready, program directors reported a variety of other objectives (Table 11). The second most prevalent objective, increasing the English language proficiency of trainees, is unique to programs serving limited English-speaking persons (as is the related and also common objective of "getting trainees interested in learning more English"). The other most frequently mentioned objectives (to teach trainees good work habits and job-finding skills) are found typically in programs serving inexperienced or disadvantaged workers.

Seven of the program directors indicated that an objective was to enroll trainees in advanced vocational classes. Of these 7 directors, 4 specified advanced classes taught only in English, 3 specified bilingual advanced classes, while 2 indicated either type of class.

Table 11

Percent of Program Directors Reporting Various Program Objectives for Trainees With Limited English-Speaking Ability

Objective	Number	Percent
To make trainees job-ready upon completion of training	37	97.4
To increase the English language proficiency of trainees	21	55.3
To teach trainees good work habits	15	39.5
To teach trainees job-finding skills	13	34.2
To get trainees interested in learning more English	11	28.9
To enroll trainees in advanced vocational classes taught monolingually in English	6	15.8
To enroll trainees in advanced vocational classes taught bilingually	5	13.2
To provide trainees with cultural awareness training	3	7.9
To teach trainees survival skills	3	7.9
To allow trainees to enroll for avocational interests	2	5.3
To provide trainees with basic/remedial education	2	5.3
To help trainees get a better job	2	5.3
To encourage trainees to obtain more educational training	1	2.6
To help trainees pass entrance/ accreditation examinations	1	2.6
To provide trainees with interpersonal skills training	1	2.6
To acquaint trainees with the resources available to them in the community	1	2.6

NOTE: Total exceeds 100 percent because of multiple responses.

An overall goal of the Subpart 3 program is to provide new and upgraded skills to limited English-speaking persons in order to help alleviate (1) unemployment and underemployment of trainees and (2) occupational skills shortages in the labor market. None of the program directors phrased objectives in these terms although these factors often were considered in program planning and design.

PROGRAM PLANNING

Development of curricula and courses involved consultation or joint planning with employers or employer associations in about three-fourths (28) of the programs studied. Although a less prevalent procedure, some programs planned jointly with Local and State Education Agencies and educational institutions.

Employers were most often involved in curriculum development and review (15 programs) and to help determine types of occupational skills and skill levels needed for employment (8 programs).

About two-thirds (24) of the program directors stated that information on occupational skills demand or shortages was used in planning or designing vocational classes. Occupational demand/shortage information reportedly was obtained from a variety of sources including, among others, State Employment Agencies, employment and training councils, State Departments of Vocational Education, special surveys, reviews of help wanted ads, and informal conversations with employers.

Several of the program directors indicated that there was a shortage of or high demand for the occupational skills offered by the programs. (An independent analysis of "demand" and "shortage" occupations undertaken as part of this evaluation and presented in Chapter VIII, indicates that some programs do appear to offer skills that are in demand.) Some of the directors mentioned specifically that there were severe shortages of bilingual persons in some occupations, particularly secretarial and medical records.

Most program directors exhibited an awareness of the demand side of the supply-demand equation in planning programs. Only one program director indicated that the occupational skills offerings were based on the desires of trainees rather than apparent demand for the skills.

OCCUPATIONAL AREAS OFFERED

Thirty occupational areas were offered in the 87 classes studied. These areas represent 5 of the 7 major vocational education categories. The distribution of trainees in bilingual vocational training programs among the occupational areas differs from that of all vocational programs for adults. As shown in Table 12, bilingual vocational programs enroll proportionately more trainees in trade and industry classes (50 percent vs. 33 percent) and office occupations (39 percent vs. 25 percent). Conversely, the bilingual vocational programs are underrepresented in the distribution and health occupational areas. A partial explanation for these differences in occupational offerings may be that the English language proficiency levels required for sales and health (as well as technical) occupations often are too high for limited English speakers.

Table 12

Percentage Distributions of Trainees' Occupational Areas, All Vocational Schools and Bilingual Vocational Training Programs

Occupational Area	Enrollees in Vocational Schools, October 1976[1]	Trainees in Bilingual Vocational Training Programs Spring-Summer 1978
Agriculture	1.9	-0-
Distribution (Sales)	10.5	6.1
Health	12.7	3.8
Consumer/Homemaking	3.2	1.3
Office	24.8	39.1
Technical	14.3	-0-
Trade Industrial	32.6	49.7
All Areas	100.0	100.0

[1] U.S. Bureau of the Census, Vocational School Experience: October 1976, Current Population Reports, Series P-20, No. 343, September 1979, p. 7.

The length of the training classes varied by occupational area. Classes in trade and industrial occupations were the longest (more than 60 percent were 360 hours or more), while office occupations had the shortest classes (two-thirds were 240 hours or less). Since most of

the classes (59 of 87) operated on a system of open entry or open exit or both,[1] class length was based on vocational instructors' estimates of the average time to complete the class.

Only 3 of the 87 classes focused on upgrading skills. The other 84 classes were designed to provide entry level skills although some of those also included upgrading.

Occupational offerings, when compared by the major vocational education categories, differed only slightly between Subpart 3 and other programs (See Table G-1, Appendix G). Subpart 3 programs offered relatively more health classes than other programs, while Subpart 3 offered no consumer/homemaking classes compared to a small number in non-Subpart 3 programs.

The proportion of trainees enrolled in each occupational area did not vary greatly by language group (Table G-2, Appendix G). A higher proportion (45 percent) of trainees of Chinese language background than any other language group were enrolled in office occupations (that is, clerical, accounting, paralegal), while three-fifths of the trainees in the "other" language group were taking classes in trade and industrial occupations.

More than half (about 54 percent) of the females in bilingual vocational training were enrolled in office occupations classes, compared to about one-sixth of the males. Three-fourths of the males and about one-third of the females were enrolled in trade and industrial classes. A

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[1] "Open entry" means that trainees can enroll in a class at any point, as opposed to "closed entry" which requires enrollment at the beginning of a class. "Open exit" means that trainees can leave a class upon attaining specified performance objectives or upon acquiring the target skills, compared to "closed exit" which requires the trainee to stay in a class until the completion date. Closed entry-closed exit classes were most common in community colleges.

disproportionately large number of women were enrolled in trade and industrial occupational areas, suggesting that there may be some training of females in nontraditional areas. (See Tables G-4 and G-5, Appendix G.) An analysis of the detailed occupational areas indicates that some of the occupations in the trade/industrial area (for example, industrial sewing) are traditionally female, but female enrollment in nontraditional occupations probably still exceeds the norm. Some sex stereotyping may exist in bilingual vocational training programs, but men and women are trained together for many occupations.

PROGRAM SUPPORTIVE SERVICES

In addition to occupational skills training, all of the programs offered some supportive services for trainees, such as job placement, counseling, basic or remedial education, transportation, and pre-vocational training.

The types of supportive services offered and the number of programs offering each service are shown in Table 13. All programs provided job placement assistance, and all but 5 programs offered at least one additional supportive service.

Twenty-five of the 38 programs provided trainee stipends, ranging from $1 to $5 per hour of training. Fourteen of these programs provided an hourly rate of $2.65, the Federal minimum wage at that time. Thirteen of the programs used CETA funds for the stipends, 7 used Subpart 3 funds, 3 used other Federal funding, and trainees in 2 programs received training allowances from sponsoring industries.

Recruitment Activities

Most of the bilingual vocational training programs have used mass media (radio, television and newspaper advertisements) and word-of-mouth referrals for the recruitment of persons with limited English-speaking

ability. Nearly all of the programs (33 of 38) reportedly had some type of recruitment activity, such as advertisements in the native language of potential trainees and in English, contacts with language minority groups, community outreach workers, and referrals by social workers, State and local employment programs and agencies, and probation officers. In addition, some programs made use of public announcements at local schools and colleges; others relied on counselors and instructors to recruit trainees. Some programs established contact with organizations serving specific populations, such as youth, farmworkers, women, and ex-convicts.

Table 13

Number and Percent of Programs Offering
Various Non-Instructional Supportive Services

Type of Supportive Service	Number	Percent
Job placement	38	100.0
Job counseling	37	97.4
Personal counseling	28	73.7
Trainee stipends	25	65.8
Basic/remedial education	17	44.7
Transportation	16	42.1
Pre-vocational training	15	39.5
Housing assistance	10	26.3
Day care	9	23.7
Medical services	5	13.2
Legal services	4	10.5
Public agency referrals	4	10.5
Job tools	1	2.6
Tutoring	1	2.6
Job assessment	1	2.6
Mental health services	1	2.6
Drivers license training	1	2.6

Recruitment of a sufficient number of trainees is not always a major problem. As one program director reported, "We don't have to have a recruitment program. We have a waiting list of persons wanting to get into the program." However, another program director identified a need for additional recruiters: "We need to get the word out that we can assist people in improving their skills."

According to responses of trainees, word of mouth has been an effective outreach tool, perhaps by default in some cases. The most frequently mentioned way that trainees heard of the training program was through friends and relatives (46 percent of all sources mentioned). Media announcements, advertisements and posters was the next most frequently mentioned source (17 percent of those mentioned). Former trainees were the next most frequent source, and all program staff and staff of other agencies accounted for only about one in five of the sources.

Counseling

Job counseling assistance was provided for limited English-speaking trainees in 37 of the 38 programs according to the program directors. The directors also reported that a counselor usually delivered this service. When asked who provided certain specific types of assistance to trainees (job orientation, job search, interviewing for a job, filling out applications), directors cited vocational instructors as the persons most often responsible.

Reports of the vocational instructors confirm generally the responses of the program directors. About half of the vocational instructors provided job counseling; and about half of those who did said that they were the only staff members providing this service. Thirteen of the instructors reported that job counseling was shared by vocational instructors and counselors.

About half of the vocational instructors reported that job orientation (including work habits, job behavior, etc.) was a part of their class curriculum, and some shared the job orientation activities with a counselor. Outside sources, including industry representatives and CETA, provided this service in some of the programs.

Job search techniques were taught by more than one-third of the vocational instructors, and assistance was received in some programs from State Employment Security Agencies, CETA and community organizations.

Nearly two-thirds of the trainees reported that someone in the program had talked with them about getting a job, and nearly three-quarters recalled being told about how to keep a job.

In addition to job counseling services, 28 program directors indicated that personal counseling services were available to limited English-speaking trainees.

Job Development and Placement Activities

All programs reportedly engaged in activities associated with placement of trainees in jobs. Most commonly, vocational instructors (in 18 programs) or counselors (in 15 programs) were responsible for placement assistance. (Two-thirds of the vocational instructors interviewed said that they were involved in placement of trainees in jobs.) Placement specialists, usually part of the staff of the sponsoring institution, were available in 12 programs. In 21 of the programs, important roles were played in placement assistance by the State Employment Service, CETA, or other employment and job information services.

Contacts with employers were maintained for job development and placement purposes in 32 of the 38 programs. These contacts include personal visits with employers, regular telephone contacts, contacts with employers of former trainees, sending brochures to employers, cooperating agreements, and trainee visits to potential employers. Program directors, vocational instructors and other staff in several programs worked with various community organizations and associations, such as civic associations, language minority groups, community agencies, advisory committees, trade councils, labor unions, business associations, and business seminars.

Chapter VI contains a discussion of how trainees found jobs after leaving training. Substantial numbers of trainees credit program placement efforts with help in finding post-program jobs.

Follow-Up Activities

More than two-thirds of the sample programs, according to reports of project directors, conducted follow-up activities with employers of trainees (26 of 38) and with former trainees (28 of 38). Five of the programs were not yet conducting follow-up activities because they were in their first year of operation. Follow-up activities in two programs were conducted by outside agencies.

Directors of programs which conducted follow-up among employers reported that their primary interests were assessing trainee performance on the job, suitability of the job for the trainee, trainee stability and mobility on the job, and appropriateness of the occupational training provided by the program. Some directors reported that they also used the follow-up contacts with employers to augment their placement activities. One program director mentioned discussing the language problems former trainees were having on the job.

The primary purposes of the follow-up contacts with former trainees, according to program directors, were to determine the appropriateness of the vocational training, whether the trainees obtained jobs, the kinds of jobs obtained, and the trainees' performance on the job. Another general purpose cited by several program directors was to ask whether former trainees needed services, such as finding another job or helping to solve other problems. One program director indicated that checks were made with trainees on the appropriateness of the ESL instruction.

About 30 percent of the trainees in the follow-up survey recalled that they were contacted by someone in the program after leaving training. Those who were so contacted were more likely than not to have been contacted more than once. According to the former trainees, the principal reasons for these contacts were to ask how or what they were doing, to help them find a job, or to ask if they needed any help.

Twenty-one of the 28 program directors who reported follow-up activities with employers or former trainees indicated that changes had been made in the program as a result of these activities. The most frequently mentioned changes were revisions of the vocational training curriculum and changes in teaching methods. Other changes included redesigning facilities and obtaining different equipment, providing additional job orientation, and obtaining cooperative or on-the-job training agreements with employers.

Two program directors indicated that follow-up activities had resulted in placing greater emphasis on job-related terminology instruction, and two other directors reported adding instructional units on improving interpersonal communication skills.

Other Supportive and Non-Instructional Services

A variety of services are provided for trainees by or through the programs in addition to recruitment, counseling, job placement, and follow-up contacts. As shown in Table 13, some of these services (for example, day care, transportation) were for the purpose of enabling trainees to take advantage of the training; other services (basic/remedial education, pre-vocational training, tutoring) were educational in nature; and yet others (for example, housing assistance, referrals for legal and medical services) were for the purpose of helping trainees meet a variety of their needs. The effectiveness of these additional services was not assessed; in fact, actual delivery was not always verified since their delivery was reportedly irregular, on an "as-needed" basis.

RELATIONSHIPS WITH OTHER ORGANIZATIONS

Most of the bilingual vocational training programs cooperated with or obtained assistance from other agencies, programs, organizations, and employers in their local areas. The most frequent types of cooperation/assistance were direct trainee services, such as stipends, recruitment

and referral, job placement, counseling, and supportive services. (See Appendix H.)

The other types of assistance obtained by the programs included provision of instructors; staff training; consultant/technical assistance services; curriculum/program design/planning; and facilities, equipment, materials and supplies.

The major sources of assistance were community colleges and four-year colleges and universities as well as Local Education Agencies. CETA prime sponsors also were a source of assistance.

A variety of other types and sources of assistance were utilized by the programs. For example, affirmative action program officers were asked to provide assistance in job placement. Unions agreed to provide materials as well as job placement. The benefits available through the Veterans Administration were used to provide stipends and tutoring for some students. Some programs sought the assistance of local and national organizations serving minority language groups, while other programs obtained help from a statewide bilingual center and a locally based Teachers Corps program.

PERCEIVED OPERATING PROBLEMS

Program directors were asked what problems had been encountered in their institutions in conducting vocational training for adults with limited English-speaking ability, and the most commonly reported problem (by 18 directors) was a lack of funds. This evaluation did not include a study of the levels of program funding, although it was learned that most programs did receive funding from multiple sources. When asked to elaborate on funding problems, directors most often cited problems with facilities, particularly inadequate space; lack of counseling staff, primarily to deal with trainees' personal problems, such as absenteeism, alcoholism, motivation, housing, and financial troubles; lack of instructional materials; and inadequate funds for trainee stipends or allowances.

In addition to funding inadequacies, the most common problems mentioned were lack of appropriate bilingual training materials (by 9 directors), problems in designing instruction to address the needs of limited English-speaking trainees (7), and too many language groups and persons of different English proficiency levels to serve (7). (These problems often surface at the classroom level and additional discussion regarding them is contained in Chapter V below.)

Several program directors perceived difficulties with instruction because of the trainees' varying educational levels, as well as English proficiency levels and lack of adequate preparation for the training. In some of the directors' own words:

". . . [we] have people with severe learning disabilities."

"Students' academic levels are low."

"We have to live with whatever English level the students have."

". . . too many different levels of [English] proficiency."

". . . unable to help people with no English at all."

"Lack of everyday [English] language class that we're not able to provide."

Most of the other problems mentioned by the program directors were rather isolated: two directors noted that there were difficulties finding qualified bilingual vocational instructors; two noted a lack of qualified ESL instructors; two mentioned difficulties in recruiting limited English-speaking trainees; and two others said that too many trainees dropped out of the program.

With the exception of inadequate funding, no problem was mentioned by as many as one-fourth of the directors. (Seven directors reported no problems.) Most of the directors who identified problems also cited steps that had been taken to deal with the problems. The solutions were as varied as the problems, and included, for example, development of bilingual materials, adjustments in curricula, class design or teaching methods; increased counseling and tutoring efforts (in one case through the use of

volunteers); and enlistment of aid from other organizations for recruitment, classroom space, and other items.

SUMMARY AND CONCLUSIONS

Bilingual vocational training programs were operating in many locations and settings in 1978. Programs existed in all major regions of the country and in all size labor markets from very small rural areas and Indian reservations to several of the largest metropolitan areas.

More than one-fourth of the bilingual vocational programs were operated by nontraditional educational organizations such as community organizations and skills centers. Some of these organizations had considerable experience operating bilingual vocational programs for adults, although Subpart 3 programs had much less experience on the average than programs funded from other sources.

The overriding emphasis of the programs was to produce job-ready workers, although all programs had multiple objectives. In addition to producing job-ready workers, the next most common objectives were to increase the English language proficiency of trainees, to teach trainees good work habits and job-finding skills, and "to get trainees interested in learning additional English."

In line with the objective of producing job-ready workers, most of the programs planned curricula and courses with the aid or consultation of employers. Most of the programs reportedly used data on demand for or shortages of occupational skills in planning and designing vocational classes.

Vocational classes were offered in a variety of occupational areas with somewhat heavy concentration in the office and trade/industrial fields. Classes in the distribution, health and technical fields were not nearly as common in bilingual vocational programs as in regular vocational programs, perhaps because English language proficiency levels

in these occupations often are too high for limited English speakers. Entry level vocational skills were taught in nearly all of the bilingual vocational classes.

All bilingual vocational programs offered some supportive services to trainees. All programs provided job placement assistance, and nearly all offered at least one additional service. Most of the programs provided trainee stipends, and the rate was usually set at the Federal minimum wage.

Nearly all of the programs had some type of outreach and recruitment activity designed to help enroll limited English speakers. More trainees heard about the program by word-of-mouth than through more formal recruitment procedures.

Job counseling assistance was a nearly universal service among the programs studied. Vocational instructors as well as counselors provided this service, sometimes on a shared basis. Job orientation, job search techniques, interviewing techniques and filling out job applications often were part of the vocational syllabus, sometimes with the aid of counselors or outside sources.

All programs reportedly were engaged in activities associated with placement of trainees in jobs, and various staff members were involved, including program directors, instructors, counselors, and, sometimes, placement specialists. Most commonly, vocational instructors were either responsible for or heavily involved with job placement. Most of the programs reportedly maintained ongoing contact with employers for purposes of job development and placement. Job development efforts often involved contacts with various community, labor and business organizations.

Most of the programs had conducted follow-up activities with either employers or former trainees or both. Follow-up contacts with employers often were to assess trainee performance and appropriateness of the

skills training provided. Former trainees reportedly were contacted for similar assessments and were offered aid in helping the trainees find jobs or obtain needed services. About 30 percent of the trainees recalled being contacted. Changes in curricula, teaching methods, equipment, facilities, and other aspects of the training programs reportedly resulted from follow-up activities in more than half of the programs.

Program directors most often perceived lack of funds as the major operating problem in bilingual vocational training programs; specifically, funds for training facilities or space, counseling staff, instructional materials, and trainee stipends. A shortage of appropriate bilingual training materials was noted by about one-fourth of the directors, and nearly as many saw a problem in attempting to serve trainees from too many language groups or too many different English proficiency levels.

The programs appeared to rely heavily on community resources, especially employers, in the planning and operation of programs. Moreover, some program administrators appeared to have made rather extensive use of available labor market information. Extensive linkages with a wide variety of community organizations and agencies were maintained not only for planning, but also for delivery of trainee job placement and supportive services.

The goals, planning, occupational skills offerings, and non-instructional services of bilingual vocational training programs appear to be generally responsive to the needs and circumstances of their limited English-speaking adult trainees. This responsiveness is reflected by the program's emphasis on (1) preparation of the trainees for employment, (2) consideration of local employment opportunities related to occupational skills offerings, and (3) provision of supportive services such as job counseling, job placement and follow-up services. The programs' responsiveness is indicated also by (1) the frequent involvement of employers and other community organizations in planning, and (2) incorporation of employers' and trainees' suggestions for program revisions.

V. VOCATIONAL AND ENGLISH-AS-A-SECOND LANGUAGE INSTRUCTION

INTRODUCTION

The core of bilingual vocational training is in the instructional components; that is, vocational classes, ESL instruction, and the integration of occupational and language skills training. This chapter presents discussions of the characteristics of instructors, the composition of the classes they teach, and instructional techniques. Also presented is a discussion and analysis of the integration and coordination of vocational and ESL instruction in bilingual vocational training programs. The case studies of ESL instruction and vocational-ESL coordination conducted in 25 programs provide the data for these latter discussions and analysis.

Each of the instructional areas is discussed separately prior to the discussion of coordination of the two.

VOCATIONAL INSTRUCTION

The method of providing occupational skills instruction in bilingual vocational training programs is somewhat different than in programs that do not serve persons of limited English-speaking ability. The instructor in bilingual training is concerned not only with the ability of the trainee to grasp the vocational skills, but also with the trainee's ability to understand any oral or written communication in English. Thus, the instructor must tailor the use of English and non-English languages to the class as a whole, to individuals within the class, and to the language requirements of the occupation. These are difficult tasks because trainees' English proficiency levels may differ widely within a class, and, in open-entry classes, the composition of the class changes continually. These considerations are, of course, in

addition to the assessments and accommodations the instructor makes for trainee differences in skill background and learning capacity which are common to all vocational training.

Instructor Characteristics

All but 13 of the 110 instructors had worked in their trade or occupational area, and 48 of them were working in their trade while also instructing in the bilingual vocational training program. About two-thirds of the instructors hold certificates or credentials in their trade or occupation; more than one-third had completed a baccalaureate or masters degree; and more than one-fifth held both occupational credentials and an academic degree.

The instructors had been instructing trainees with limited English-speaking ability for a mean of 6.7 years. About two-thirds of the instructors had been teaching at the programs studied for less than three years. Instructors in the non-Subpart 3 programs had considerably more relevant experience than those in the Subpart 3 programs. Only 25 percent of the Subpart 3 vocational instructors, compared to more than half of those in other programs, had more than 5 years experience in instructing persons with limited English-speaking ability.

Although most of the vocational instructors had several years of experience instructing persons with limited English-speaking ability, about two-thirds reported that they had not had any special training for working with the limited English speaking. The most commonly reported types of training were: cultural awareness, teaching the disadvantaged and bilingual instruction (11 instructors); ESL (9); general in-service training or workshops (7); adult education (5); and vocational education instructional techniques (4).

Many of the vocational instructors (about three-fifths) identified some type of additional training that they believed would be helpful in

their work with limited English-speaking trainees. The most frequently suggested topics, in descending order of frequency, were:

- instructional skills, curriculum and materials development;
- teaching techniques and adult education;
- ESL and language skills;
- bilingual education and training;
- cultural awareness;
- English language skills;
- exchange of information with other instructors; and,
- occupational vocabulary.

Many of the vocational instructors in bilingual training programs have had little formal training in educational areas and instructional techniques, and, quite logically, these are the areas in which they perceive the greatest needs for additional training.

About three-fourths of the vocational instructors were from racial/ethnic and cultural backgrounds similar to those of the trainees in their classes. Overall, 75 of the 110 instructors said that they were of Spanish or Hispanic origin, 9 said Asian or Chinese origin, and one is a Native American. Most of the remaining instructors were white and of various other origins.

In more than three-fourths of the classes studied (67), the instructors rated their ability to speak the native language of the majority of trainees as "Very Well" on the MELP scale. Only nine instructors (about 10 percent) rated themselves as being able to speak the major trainee language "Not At All" or "Just a Few Words."

Some classes had trainees representing more than one language group, and the vocational instructors were rarely proficient in more than one of these languages. In fact, of the 14 classes in which more than one non-English language was represented, the instructors in 12 classes reported that they could not speak the secondary non-English languages at all.

Instructor-Trainee Communication

Communication in the classroom between the vocational instructor and trainees with limited English-speaking ability occurred by a variety of methods in addition to the use of English:

- Use of the native language of the trainees by the instructor (75 classes);
- Non-verbal activities (that is, demonstrations, gestures, diagrams), generally to supplement use of the trainees' native language (28 classes);
- Bilingual or native language reading materials, usually to supplement oral instruction in the trainees' native language (21 classes);
- Bilingual or native language audiovisual materials (14 classes);
- Translation of instruction from English to the trainees' native languages by trainees (14 classes); and
- Translation by bilingual aides or translators (6 classes).

The great majority of the vocational classes (75) had instructors who were bilingual in English and the trainees' native language. In the classes in which speaking the native language of the trainees was not a communication method, the instructors used bilingual aides/translators (in 3 classes), translation by trainees (6 classes), and demonstrations, gestures or hand signals (2 classes). Thus, the trainees from all but two of the classes reportedly had some degree of bilingual instruction although the instructors did not always speak their language. Non-verbal forms of communication (demonstrations, gestures, diagrams), the only medium of instruction other than English in two classes, were used frequently to enhance trainees' understanding even in classes with a bilingual instructor.

Even though bilingual instruction reportedly was provided in vocational classes, the mix of English and non-English languages that was

used varied widely. The mix of languages used was measured by asking vocational instructors how much of the time they used English in their instruction at two points--during the first and last weeks of the class (or first and last weeks of a trainee's attendance). The results are shown in Table 14.[1]

Table 14

Distribution of Frequency of English
Used by Instructors in Vocational Skills Classes

Frequency of English Use	First Week		Last Week	
	Number	Percent	Number	Percent
All of the time	18	20.9	24	27.9
Most of the time	16	18.6	37	43.0
About half of the time	22	25.6	13	15.1
Less than half of the time	14	16.3	9	10.5
Very little of the time	13	15.1	3	3.5
None of the time	3	3.5	NA	NA
TOTAL	86	100.0	86	100.0

Note: NA = Not allowable response.

The principal features of the data in Table 14 are as follows:

- English use in vocational classrooms was much more frequent during the last week than during the first (English was used most or all of the time during the last week in 70.9 percent of the classes compared to 39.5 percent during the first week);
- Although instructors in about three-fifths of the classes used English no more than about half of the time during the first week, a sizeable minority (about 20 percent of the classes) had instructors who used only English at the beginning of the class; and
- Instructors in only 14 percent of the classes used English less than half of the time in the final week.

[1] In classes with more than one instructor the responses were combined to represent a class average.

It should be noted that since instructors were asked about their own use of language in the classroom, the use of non-English languages by aides and translators is not reflected in the numbers in Table 14.

The use of English vis-á-vis the trainees' native language as a medium of instruction would increase logically with increases in the trainees' ability to understand English. In fact, in the Subpart 3 program, a policy is followed of encouraging extensive use of the trainees' native languages by the instructional staff at the beginning of a vocational class. Use of the trainees' native languages is to insure that the vocational instruction is understood by the limited English-speaking trainees. As the vocational class progresses and the trainees become increasingly proficient in understanding English, the use of English as an instructional medium is to increase, and non-English languages are to be used for imparting difficult concepts and as a bridge for teaching English job-related vocabulary and structures. By the end of the class, the instructor should be using English all or nearly all of the time. This approach incorporates the use of job-related English instruction by both the vocational instructor and by ESL instructors. Within this overall "model," vocational instructors are to use as much English as possible and as quickly as possible consistent with the ability of the trainees to learn the job skills. This model is a logical approach to providing bilingual vocational training and appears to be appropriate for all programs, not only the Subpart 3 programs.

In view of the above, it might be expected that use of English as a medium of instruction would be rare during the first week of a class. However, as shown in Table 14, the instructors in 18 classes (20 percent of the total) used English all of the time during the first week. (These classes outnumbered those in which the instructor used English very little of the time or not at all during the first week.) An analysis was made of the 18 classes involved to determine what factors might have accounted for that pattern. The analysis revealed that only English was used by instructors during the first week in:

- nine classes (including five funded under Subpart 3) which had trainees with two or more non-English native languages or both Chinese dialects (Mandarin and Cantonese). These classes served between two and seven non-English language groups, making English the only possible common ground for all trainees. Four of these nine classes also had translators or instructional aides who assisted the instructors in communicating with trainees.

- five classes (four Subpart 3) in which the instructors were not proficient in the trainees' native languages (two Spanish, one Lakota, one Navajo, one Chinese). In two of these five classes, translators or aides were available to assist the instructors.

- four classes (one Subpart 3), all enrolling only Spanish speakers, for which no particular reason emerged for the early use of English in the classroom. The instructors in these classes were highly proficient in Spanish and the occupational areas involved did not appear to require high English proficiency.

Other factors that should be considered in interpreting the figures in Table 14 are that the type and difficulty of English used varies substantially by occupation and the specific tasks being taught, and the instructor's style of instruction. Some instructors, for example, begin using and teaching simple English vocabulary early in the class. As difficult concepts are introduced later, the trainees' native language may be used.

A correlation analysis of factors associated with the degree of English use in the vocational classroom during the first week reveals, that the major factor is the instructor's ability to use the appropriate non-English language; lower proficiency in the trainees' native language resulted in higher levels of English usage.[1] English is less likely to be used by instructors in classes with trainees of Spanish language background, and is more likely to be used in classes enrolling Chinese speakers. English use by vocational instructors also was related positively to trainee English language proficiency. The presence of

[1] For the detailed analysis, see the discussion in Appendix I.

Subpart 3 funding was associated positively with the amount of English used in the class during the first week by vocational instructors.

An analysis was undertaken to attempt to determine why vocational instructors in Subpart 3 programs spoke English more often during the first week of class than instructors in other programs. As discussed in Appendix I, the positive correlation of .19 between the amount of English used and Subpart 3 funding is reduced to .11 when controlling for the effects of (1) the instructors' proficiency in the trainees' native language, and (2) instructors' years of experience in training limited English-speaking persons. Each of these variables is negatively related both to Subpart 3 funding and to the amount of English used by instructors in the classroom. Thus, although Subpart 3 vocational instructors did indeed use more English in the classroom during the first week than instructors in other programs, the reasons for this difference appear to be that Subpart 3 instructors had relatively lower proficiency in the trainees' native languages and comparatively fewer years experience instructing persons of limited English-speaking ability.

For comparison with the estimates of the vocational instructors, trainees were asked how often their vocational instructors used English in the classroom. (The trainee responses are shown in Appendix I, Table I-2.) The trainee estimates are likely to have represented the instructors' use of English immediately prior to the survey. At that time, the trainees were at various stages of their training. No information was obtained on the level of difficulty of the English used. The following proportions of trainees reported that their instructors used English for instruction for the indicated amounts of time:

Never	4%
Seldom	22%
About half of the time	24%
Most of the time	20%
All of the time	30%
TOTAL	100%

Trainees also were asked how much of the time they had trouble understanding the vocational instructor when (s)he spoke English. As shown in Table I-3, Appendix I, only about one-twelfth of trainees reported that they had trouble most or all of the time. For two-thirds of the trainees who had trouble understanding their instructor, the instructor used English in the classroom no more than about half of the time. There were only 18 trainees (or fewer than 3 percent of the total) who had trouble understanding their instructor all or most of the time and whose instructor spoke English most or all of the time.

About half of the vocational instructors gave additional assistance to trainees who had difficulty in keeping up with the instruction. The types of assistance given were: encouraging or sending trainees to take additional ESL instruction, providing special tutors and/or instructional materials, and providing individual counseling.

Instructional Materials

Bilingual, multilingual or non-English vocational instructional materials were used in 33 classes (40 percent of those studied). A total of 68 separate items were reported by the instructors for those classes, and most of these (48) were printed materials. Audio and/or visual or printed visual materials, such as diagrams or posters, comprised the remainder.

About half of these instructional materials were published, and the remainder were developed by the instructors or other program staff specifically for use in bilingual training classes. Nearly half of the published materials were completely in non-English languages, while, conversely, about 85 percent of the self-developed materials were in English and non-English languages.

Monolingual non-English materials were used in classes covering several occupational areas, including business and office training, plastics, cosmetology, and auto mechanics. Bilingual or multilingual

printed materials, especially those that were self-developed were used most often for training in office occupations, culinary arts/professional chef, and machinist. Audio-visual materials with non-English content were not commonly used; two classes (in business training and auto mechanics) accounted for nearly all of these materials.

Perhaps as important as knowing about the use of bilingual vocational materials is knowing in what cases they were not used. Since some of the classes studied did not have bilingual or non-English language materials, a lack of such materials may be indicated. Appendix J provides a listing of the occupational areas for which published non-English materials were not used or were not available and indicates for which occupational areas such materials have been developed by staff of bilingual vocational training programs. No published bilingual or non-English language materials were available for classes in, among other areas, dental assisting, auto body repair, welding, and small engine repair.

Vocational instructors, as did some program directors, noted the lack of bilingual vocational training instructional materials. Fifteen instructors suggested specifically the use of bilingual and non-English language materials to improve instruction. Other instructors recommended increased use of audiovisual materials and equipment, and additional funds for materials development.

ENGLISH LANGUAGE INSTRUCTION

English language instruction is an integral part of bilingual vocational training. Bilingual vocational training occurs only if limited English-speaking trainees learn both occupational skills and job-related English. English language instruction can be provided by the vocational instructor, an ESL instructor in a separate class, or a combination of both. The usual approach to English language instruction is for trainess to be enrolled in ESL classes concurrently with their

vocational classes. As a result of program policy, all Subpart 3 programs have a separate ESL component.

The specific English language requirements for all the various occupations have not been determined and documented systematically. As discussed below, on-the-job English needs usually are determined on an ad hoc basis by vocational instructors. Therefore, the vocabulary and English structures that are taught vary among programs, even within the same occupational area.

Ideally, limited English-speaking adults in a bilingual vocational training program would be provided with sufficient English language instruction to enable them not only to hold a job in an English-speaking environment, but to search, apply and interview for jobs as well. (See Chapter IV for a discussion of the offering of these services.) Some proficiency in English is necessary beyond the on-the-job requirements in order to succeed in the labor market.

Availability of English-as-a-Second Language Instruction

According to the directors of the 38 programs studied, 33 (87 percent) have ESL classes available for vocational trainees. Nearly all of these ESL classes (31) were operated by the organization that conducts the bilingual vocational training.

In nearly half of the programs in which ESL was available, trainees were required to enroll concurrently in ESL and vocational classes. Completion of some ESL training prior to entering occupational training was required in eight of the programs. Enrollment in ESL classes was optional in 10 programs.

In 18 of the 33 programs, the ESL classes enrolled only vocational trainees, while the others had a mixture of vocational and nonvocational students. Twenty-eight of the 33 program directors reported that the ESL instruction included teaching vocabulary related to the occupational

training of the vocational trainees, and all but one of these stated that there were procedures for the vocational instructors to inform the ESL instructors of the appropriate job-related English vocabulary.

ESL Placement and Screening

All of the 25 ESL instructors and nearly all of the program directors (35 of 38) reported that the trainees' English language proficiency was assessed at entry. Counselors or ESL instructors usually were responsible for this evaluation. The assessments most commonly were used for placement in ESL and vocational classes.

The most frequent method of assessing proficiency was an informal, unstructured interview measuring speaking ability and listening comprehension (reported by half of the program directors and ESL instructors). The content of the interviews was described frequently as being conversational and including the trainees' work history and interest in vocational training. In one program its interview for trainees wishing to enter a trade and industrial occupation was based on the informal preliminary screening sections of a structured oral interview, while the structured measure was used for office occupations trainees.

Structured oral interviews were the next most common method of assessment and were reported by either the ESL instructor or program director at 14 of the 38 programs. This type of measure, as compared with the informal interview, consists of a set of specific questions that is used with each trainee. The Ilyin Oral Interview was reported to be used at 6 programs, while 5 programs developed their own structured interviews.

Standardized measures, including general educational and proficiency tests, were used in 11 programs; of these, sections of the Michigan Test Battery were the most common (7 programs). Achievement and aptitude tests also were used in about one-fifth of the programs.

Eighteen of the ESL instructors reported that more than one method of assessment was used with each trainee. In at least 12 programs, both oral/aural and reading/writing language skills were assessed, using either an unstructured or structured oral interview combined with another means. In some programs, trainees were asked to write compositions, while in others, intensive drills were administered. In 7 programs, both standardized tests and oral interviews were the methods of assessment.

Determination of Vocational English Requirements

More than half of the vocational instructors (65 of 110) reported that they determined the type and amounts of English trainees would need on the job. Many factors account for whether such a determination is made, including, among others, the level of English knowledge required in the occupation, the instructor's knowledge of job English requirements, and the predominant languages spoken in the community. Relative to the last point, one vocational instructor commented: "The trainees here will only have to speak English to the boss, and they rarely speak to the boss. They usually speak to the forelady, and she speaks Spanish."

Almost all (61 of 65) of the instructors who assessed the English language needs on the job said that they relied on their own experiences in the occupation. About half of these instructors reported using additional methods to supplement their own knowledge, including discussions with employers (22 instructors) and analysis of job descriptions (18). Other methods cited were text and course requirements, English language test, prior experience in teaching ESL, discussions with job counselors, evaluation of a trainee's language needs by a counselor, and a joint effort by the vocational and ESL instructors.

English Skills Taught in Vocational and ESL Classes

Little information has been available prior to this study on the types of English skills taught to trainees in bilingual vocational training programs. This study includes an examination of 10 types of

oral, reading and writing skills that are related to various work environments and which are the concern of both vocational and ESL instructors.[1]

Each of the 110 vocational instructors and the 25 ESL instructors were asked how much emphasis--"Quite a bit," "Some," "A little," or "None"--(s)he placed on teaching each of the types of language skills. Except for one of the writing skills (writing narratives/descriptive passages), at least three-fifths of the vocational instructors placed at least "some" emphasis on each of the skills (Table 15).[2] More than 80 percent of these instructors emphasized four of the skills--two oral and two reading--at least "some".

ESL instructors were most likely to emphasize two of the oral skills (communicating with the public in person and telephone contacts) and one of the writing skills--writing simple statements. A higher proportion of vocational instructors, however, as compared to the ESL instructors, placed "quite a bit" of emphasis on communicating with supervisors and fellow employees. These two skills, more than the other two oral skills, may be interpreted as job-related by the vocational instructors.

The vocational and ESL instructors for office occupations were less likely to place "quite a bit" of emphasis on communicating with supervisors than all instructors, while both types of instructors in trade and industrial occupations were more likely than others to emphasize this language skill. (See Table K-2, Appendix K.) For both of these occupational areas, vocational instructors placed more emphasis on this language skill than ESL instructors.

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[1] An additional category--consumer and survival skills--applies only to ESL instructors since these areas normally are not related specifically to work environments. These data appear in Table K-1, Appendix K.

[2] The base for the ESL percentages in Table 15 is the number of vocational classes served by each ESL instructor. For example, if an ESL instructor serves trainees from three vocational classes, her/his responses are counted three times. Table K-2, Appendix K, shows weighted totals by occupational area. Table K-1, Appendix K, gives unweighted or raw responses for comparison.

Table 15

Percentage of Vocational and ESL Instructors by Degree of Emphasis Placed on Teaching Various Types of English Language Skills (weighted by number of classes taught by each instructor)

English Language Skill	Type of Instructor and Degree of Emphasis								Total	
	Quite a Bit		Some		A Little		None		Voc.	ESL
	Voc.	ESL	Voc.	ESL	Voc.	ESL	Voc.	ESL	(n=110)	(n=46)
Communicating With the Public In Person	50.0	84.8	26.4	6.5	10.9	8.7	11.8	-0-	99.1	100.0
Telephone Contacts	36.4	65.2	26.4	8.7	18.2	19.6	18.2	4.3	99.2	97.8
Communicating With Supervisors	60.0	39.1	24.5	19.6	9.1	39.1	5.5	2.2	99.1	100.0
Communicating With Fellow Employees	47.3	28.3	33.6	34.8	8.2	32.6	10.0	4.3	99.1	100.0
Reading Instructions, Directions	70.9	28.3	16.4	65.2	6.4	4.3	4.5	-0-	98.2	97.8
Using Manuals As A Reference	60.0	32.6	20.9	15.2	8.2	13.1	10.0	39.1	99.1	100.0
Reading Diagrams	45.5	21.7	20.9	26.1	13.6	41.3	18.2	10.9	98.2	100.0
Filling Out Forms	44.5	30.4	29.1	28.3	8.2	34.8	17.3	4.3	99.1	97.8
Writing Simple Statements	30.0	43.5	30.0	19.5	19.1	34.8	19.1	2.2	98.2	100.0
Writing Narrative/ Descriptive Passages	20.0	21.7	12.7	21.7	29.1	13.1	35.5	43.5	97.3	100.0

Note: Percentages do not always total 100.0 because of non-response.
ESL data based on responses of 25 ESL instructors weighted to represent the 46 vocational classes served by these instructors.

Vocational instructors much more frequently placed "quite a bit" of emphasis on the three job-related reading skills--reading instructions and directions, using reference manuals, and reading diagrams--than did the ESL instructors. Vocational instructors for office occupations emphasized reading instructions and directions more than all instructors, while vocational instructors in trade and industrial occupations emphasized this skill less than other vocational instructors. Compared to other ESL instructors, the ESL instructors serving trainees in trade and industrial occupations placed more emphasis on reading instructions and directions, while those serving trainees in office occupations placed less emphasis on these skills. For both of these occupational areas, the vocational instructors placed more emphasis on this language skill than did the ESL instructors.

Different writing skills were emphasized by each type of instructor. Vocational instructors tended to place "quite a bit" of emphasis on filling out forms, while ESL instructors emphasized writing simple statements. Vocational instructors in office occupations were more likely to emphasize filling out forms than other vocational instructors. Both types of instructors for trade and industrial occupations emphasized these two writing skills less frequently than all other instructors.

Since the information obtained regarding the content of ESL instruction applies to those programs where the closest coordination exists between ESL and vocational training, the patterns of English language skills taught may have been different in programs without such coordination.

Methods of Teaching English in Vocational Classes

More than half of the vocational instructors reported having a formal plan for teaching English in the occupational skills class. Several of these instructors stated specific goals that they set for the trainees. An instructor in a distribution occupation wanted "each trainee to be able to teach a lesson before they leave my class." In a

trade and industrial occupation, the vocational and ESL instructors agreed on the necessary terminology and types of situations in which trainees would need to understand and use English "to be able to communicate satisfactorily...in a work situation." In some classes trainees are taught to write resumes and job-related sentences (in English) and to fill out job applications and other office forms.

In general, each instructor used a combination of approaches to teach English language skills. The most frequent method cited (35 percent of all methods) was development of vocabulary that was job-related, through the use of lists and testing of appropriate terminology, and requiring trainees to use English for the names of tools and processes. The use of English by the instructor for all work, for testing purposes and/or for instructional materials and encouraging trainees to use English as much as possible was the next most frequent approach to English instruction. Other methods reported include:

- use of bilingual materials and instruction--for example, tapes, manuals, and pamphlets;
- demonstrations of work equipment and procedures;
- audio-visual materials, including job-related films;
- simulated on-the-job situations and role-playing; and,
- experiences and contacts with potential employers or customers, including field trips, and work experience.

The emphasis on job-related vocabulary accounted for more than two-fifths of the methods reported within each occupational area. The use of bilingual materials and instruction was most common in the trade and industrial occupations.

Methods of Teaching Job-Related English in ESL Classes

On-the-job vocabulary and English language structures as well as other job-related skills (that is, looking, applying, and interviewing

for a job) were taught by the ESL instructors. A variety of methods and materials are used by each of the instructors. The most frequent method reported (one-sixth of all methods) was simulating on-the-job situations which require the use of job-related vocabulary and materials (such as job applications or office forms) in English, including role playing (for example, the instructor plays the part of a supervisor), and mock interviews. Conversations and discussions about job descriptions or job training in which the trainees are encouraged to use English job vocabulary is another technique that was reported (one-eighth of all methods). This latter approach was used for testing purposes as well as for teaching basic communication skills. Emphasis on the development of job-related vocabulary practice drills for grammar and pronunciation, and audio-visual and audio-lingual materials were also commonly used to teach English skills. Additional methods reported include:

- writing samples of business correspondence or composition, preparing resumes;
- occupational manuals and newspaper ads;
- field trips;
- presentations and explanations by the trainees on job-related topics;
- guest speakers from industries and the public employment service; and
- demonstrations of work equipment and procedures.

Simulating the work environment and role playing were most common for office and trade and industrial occupations; 4 out of 5 instructors reporting these methods taught trainees in these two fields. Development of job vocabulary also was more frequently mentioned by instructors in these same fields.

In several of the ESL classes, the trainees' native language was used to facilitate instruction. For some instructors, this involved

translating to the native language to provide a clearer explanation of a complex or abstract process. Other instructors discussed specific activities that were conducted bilingually. For example, one instructor taped the trainees' speech (in English) using these samples to measure progress and for discussing the errors with the class. The discussion was held in two languages.

COORDINATION OF VOCATIONAL AND ESL INSTRUCTION

Integration of vocational and ESL instruction in bilingual vocational training programs requires coordination between the two instructional components. Coordination is important to help insure that the ESL instruction focuses on the English vocabulary and structures that limited English-speaking trainees need in their occupational skills class and on the job. The vocational instruction should provide a framework for the ESL instruction, and ESL should reinforce and supplement the vocational training.

About 60 percent (65 of 110) of the vocational instructors reported having coordinated the occupational skills instruction with the ESL instruction. Of the 25 ESL instructors interviewed, 22 stated that they had worked with vocational instructors in teaching job-related English language skills. In a few of these cases, direct contact between vocational and ESL instructors was limited, but job-specific terminology was taught in a centralized laboratory or coordination was handled through a central office. Coordination of vocational and ESL instruction was facilitated in three programs because the ESL instructors either were former vocational instructors or had prior experience in the occupational fields involved.

The coordination activity reported most frequently was the exchange of job-specific vocabulary lists and discussion of the terminology between the two types of instructors. One vocational instructor indicated that a determination had been made of a pre-established number of words to be given to the ESL instructor each month. Another activity

mentioned frequently was informal or formal discussions between vocational and ESL instructors, sometimes involving other staff. The discussions usually focused on the basic English language skills the trainees would need, as well as the instructional materials to be used. At one program, the instructors reported that they met at the end of each week to review the next week's lesson and to provide supplemental material for each other. Several vocational instructors reported discussing and evaluating the trainees' progress and weaknesses with the ESL instructors.

Other major approaches to coordination of ESL and vocational instruction included:

- exchange of instructional materials, both printed and audio-visual;
- team teaching, including linking field projects, holding joint classes on specific topics and joint efforts in helping trainees prepare their resumes;
- joint ordering of appropriate instructional materials;
- joint curriculum planning; and,
- introduction of job-specific materials and terminology in the ESL class prior to use in the vocational class to facilitate skills training.

Some examples of unique or innovative coordination activities were:

- joint development of bilingual materials, including texts and flash cards and of non-bilingual materials;
- vocational and ESL instruction conducted in the same class by both types of instructors;
- participation in the ESL class by the vocational instructor to help review the occupational terminology; and,
- participation in the occupational skills class by the ESL instructor to observe trainees' reactions and ask the vocational instructor to repeat instructions in English when trainees appeared not to have understood.

In sum, a majority of the programs, particularly those funded under Subpart 3, emphasized and had some mechanisms for coordination of occupational skills and ESL instruction. Other than its relative prevalence in Subpart 3 programs, which results from national program policy, no identifiable patterns were found to account for the existence of coordination of vocational and ESL instruction in the various programs.

In some programs in which coordination was professed, it appeared to be perfunctory, and in about one-fifth of the programs studied, vocational instructors were not aware of the content of ESL instruction. Coordination has not always been effective either. About one-eighth of the vocational instructors who had worked with ESL instructors on coordinating instruction said that the ESL instructors were not teaching terminology related to the occupational skills training.

SUMMARY AND CONCLUSIONS

Philosophies and approaches regarding instructional methods varied widely among the bilingual vocational training programs studied. A monolithic "model" of bilingual vocational instruction does not appear to exist in practice.

The vocational instruction components of bilingual training programs relied heavily on instructors with work experience in the trade or occupations that they were teaching. Almost all of the vocational instructors had such experience, and nearly half of them were working in their trade while instructing on a part-time basis. Although the majority of the vocational instructors had prior experience teaching persons of limited English-speaking ability, two-thirds had not had any special training for working with that group. Most of the vocational instructors identified types of additional training, particularly in educational areas and instructional techniques, that they thought would be helpful to them in instructing limited English-speaking trainees.

The vast majority of the vocational instructors were from ethnic and cultural backgrounds similar to their trainees and also were bilingual in English and the native language of the trainees in their classes. A few instructors, however, were not proficient in the appropriate non-English languages, and they relied on a variety of other means of communicating with trainees, including use of instructional aides and translators; non-verbal communication, such as demonstrations and gestures; and bilingual materials. Instructor-trainee communication was hampered in some of the classes because of enrollment of trainees from multiple non-English language groups. In these instances, vocational instructors used the various communication methods noted above as well as a fairly heavy reliance on the use of English as a necessary common denominator.

As evidenced by vocational instructors' use of English as a medium of instruction, some of them thought that English should have been the predominant language of instruction from the beginning of training, while others introduced English gradually to supplement and, eventually, to replace or nearly replace the native language of the trainees. In general, a discernible shift was noted from use of non-English languages to use of English from the beginning to the end of a class (or a trainee's attendance in the class). Higher levels of English use by the vocational instructors in the classes were associated most often with the instructors' low proficiency in the trainees' native language. Vocational instructors in Subpart 3 programs used English as a medium of instruction during the first week more often than instructors in other programs. This disparity appeared to be a result of the Subpart 3 instructors' relatively low proficiency in the trainees' native language and comparatively fewer years of experience in working with limited English-speaking persons.

Trainees' self-reports of ability to understand their instructors' English in the class indicate that few had severe problems. About half of the vocational instructors provided additional assistance to trainees who had difficulty keeping up with the instruction.

Bilingual, multilingual or non-English vocational instructional materials were used in 40 percent of the classes studied. Many instructors cited a paucity of appropriate bilingual vocational materials, and half of the non-English language materials being used were developed by the instructors who were using them or by other instructors.

Most of the bilingual vocational training programs had an ESL component although a few relied on only the vocational instructors to provide English language instruction.

Many of the programs, particularly those funded under Subpart 3, emphasized the coordination of vocational and ESL instruction to improve the job-related English of trainees. The purpose of such coordination is to integrate the two instructional components so that vocational concepts and vocabulary are reinforced by the ESL instruction.

The most common method of vocational-ESL coordination was exchange of job-related word lists and lesson plans between vocational and ESL instructors. The two types of instructors often discussed job-related vocabulary and each other's lesson plans on a formal or informal basis. In some programs, interaction between vocational and ESL instructors was limited because of the existence of a language laboratory which was responsible for teaching job-specific terminology or because ESL-vocational coordination was handled through an intermediary such as the program director or ESL coordinator.

Some innovative and intensive approaches to ESL-vocational skills coordination were observed, including the conduct of both types of instruction with both types of instructors in the same classroom. These types of approaches were relatively rare, however, and in a sizeable minority of the programs, vocational instructors were unaware of ESL activities.

Upon entry to the programs, most trainees' English language proficiency was assessed for purposes of placement in ESL and vocational classes. A variety of assessment methods and measures were used,

including structured interviews, standardized measures, and achievement tests, but informal, unstructured interviews with trainees were the most prevalent approach. Determinations of vocational English requirements were based most often on the vocational instructors' experiences in the particular occupations, although other methods were employed such as discussions with employers and reviews of text and course requirements.

ESL and occupational skills instructors placed different degrees of emphasis on teaching various English language skills. Among the oral language skills, ESL instructors placed relatively heavy emphasis on communicating with the public, while vocational instructors were more likely to stress communication with fellow employees and supervisors. Vocational instructors placed more emphasis than ESL instructors on certain reading skills that appear to be directly job-related--reading instructions and directions, using reference manuals, and reading diagrams. Different writing skills were emphasized by each type of instructor, with vocational instructors placing relatively more emphasis on filling out forms and ESL instructors focusing more heavily on writing of statements.

Bilingual vocational training programs appear to have been searching for and experimenting with various approaches for the proper instructional techniques to provide limited English-speaking trainees with the occupational and English language skills needed to succeed in the labor market. These activities have blended, sometimes tentatively, two disparate groups of educators--vocational skills instructors and ESL teachers. Individually, these two groups contend daily with inadequate materials; together, they often try to forge appropriate approaches to both support one another's instructional objectives and to meet the trainees' vocational and occupational English language needs. To date, these efforts appear to have been effective for the most part, although further refinement and tailoring of bilingual vocational training to the unique needs of the limited English-speaking adult trainees are essential. Some possible refinements of the instructional processes in bilingual vocational training and methods for achieving them are discussed in the final chapter of this report.

VI. POST-PROGRAM ACTIVITIES AND LABOR MARKET BEHAVIOR

INTRODUCTION

The former trainees of bilingual vocational training programs who were included in the follow-up survey were asked detailed questions regarding their principal activities after leaving training. The principal activities covered are employment and non-employment. The latter category contains unemployed periods, periods spent in school or training, and time "idle" or not engaged in any of these specific activities. The information was collected from each former trainee through administration of a detailed "activity calendar" which accounts for all time periods and the length of each activity since leaving the program.

The discussions of this chapter focus, first, on the circumstances under which trainees left the training programs and, then, on the overall labor market behavior of the follow-up sample in the post-program period. Changes in labor force status between the pre- and post-program periods are discussed as part of trainee outcomes in Chapter VII.

REASONS FOR LEAVING TRAINING

Nearly three-fourths of the 472 persons in the follow-up sample who were no longer in training reported that they had completed the training class.[1] Almost half of the trainees who had completed training did so by virtue of meeting their training objectives, while the other trainees remained in a class until its completion.

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[1] At the time of the follow-up survey, 46 persons (or 8.9 percent of the follow-up sample of 518 persons) still were enrolled in the same training class from which they were sampled originally. Thus, data regarding reasons for leaving training, post-program activities, and pre-post program changes apply only to 472 trainees.

Training completion rates were higher in the Subpart 3 programs than in other types of programs: the completion rate in Subpart 3 programs was about 90 percent. (Since trainees were sampled originally from among those enrolled in training, it is not known how many might have already left training.) The most common reasons for not completing training in both types of programs were personal or family considerations. Health and transportation problems were other reasons mentioned for leaving training prior to completion.

Not all reasons for leaving training are negative nor do all result from problems. Nearly 10 percent of the trainees left training prior to completion in order to take a job. Leaving training to take a job (as with all reasons for leaving) was a much less frequent occurrence in Subpart 3 programs than in other programs.

Very few of the trainees (fewer than 3 percent) left training because of problems with understanding instructors, with the pace of the instruction, or because they were dissatisfied with the instructors. Only three trainees said that they left their training class because of a problem associated with language proficiency or understanding of English.

PRINCIPAL POST-PROGRAM ACTIVITIES

On the average, trainees who had left the program had been out of training for about 36 weeks. The principal activity of persons during the post-program period was employment. About 65 percent of all of the post-program time of all of the trainees was spent working. Another 9 percent of total time of all of the persons was spent looking for work. Thus, about 74 percent of the total time was spent in the labor force; that is, working or seeking work. Of the time spent out of the labor force by the former trainees, the majority was spent in school, with the remainder in job training courses and other non-labor force activities, such as idle time or housework. At the time of the follow-up interview in 1979, about 8 percent of the former trainees were enrolled in a school or in a training program as their major activity.

The primary reasons given by former trainees who were out of the labor force for not seeking work were personal rather than economic. Family or personal responsibilities as well as health problems were mentioned more than 10 times as often as such reasons as lack of jobs or lack of job skills. Only two persons said that they did not seek work because of language problems.

JOB STABILITY

The post-program activities of the trainees indicate a stable work history. About 20 percent of the former trainees held no jobs during the post-program period (compared to 27 percent who did not work in the year prior to entering the program). Of the 373 persons holding jobs since leaving training, nearly 75 percent held only 1 job. About 20 percent of those who had worked held 2 different jobs; about 5 percent held 3 jobs; and, none had more than 3 jobs. The mean number of jobs held since leaving training was 1.3.

The mean length of all post-program jobs was 29.5 weeks as of the date of the follow-up. Since most of these jobs were current at the time of the follow-up survey, this average length is truncated.

UNEMPLOYMENT AND JOB SEEKING

As noted above, a substantial proportion of post-program time of the trainees (about 9 percent of total time and about 13 percent of all time in the labor force) was spent looking for work. About 30 percent of the former trainees reportedly experienced unemployment since leaving the program. Of the persons who had been unemployed, about 86 percent had only one unemployment spell, and only 1 person was unemployed as many as 3 times.

About 73 percent of the former trainees who had been employed in the post-program period found their first job within one week after leaving training. Within 4 weeks after leaving training, 82 percent were employed.

The persons in the follow-up survey did not experience a large number of unemployment spells, but the mean length of each unemployed period was rather substantial (10.6 weeks), including periods that were incomplete at the time of the follow-up survey.

Former trainees sought jobs by a variety of means during their spells of unemployment. Table 16 provides a tabulation of the proportions of persons who used various sources to help find their current (as of the follow-up interview date) or most recent job. The former trainees most frequently found their jobs through friends or relatives or on their own. The next two most frequently mentioned sources of help were the placement service or office of the program and vocational instructors. Together, program placement services and instructors were a source of aid to one-fourth of the trainees in finding their most recent job. Most of the persons mentioning the program or instructor as a source of job-finding help probably were referring to help received as they left or shortly after they left the program since 75 percent of those who had worked after leaving the program had held only one job.

Table 16

Sources of Aid in Finding Current or Most Recent Job

Source of Aid	Proportion Mentioning (n=373)
Friend/Relative	38.9
Found On Own	20.1
Program Placement	14.7
Vocational Instructor	10.7
Newspaper, Radio, TV	9.1
Public Employment Service	4.8
Community Organization	2.7
Private Employment Service	1.9
Other	5.9

NOTE: Total exceeds 100 percent because of multiple responses.

The reasons given by former trainees varied widely for why they were unable to find work, but the most common reason by a wide margin was a lack of jobs, cited by more than half of the trainees (Table 17). More than one-fourth of those who were unable to find work attributed their difficulty to lack of experience. More than one-fifth said that they were unable to find work because of a language barrier. Most respondents cited more than one reason for being unable to find work, but clearly economic conditions, lack of work experience and language barriers were the most important.

Table 17

Reasons Given By Former Trainees For Being Unable to Find Work, Most Recent Post-Program Non-Working Period

Reason	Proportion Mentioning (n=127)
No jobs available	57.5
Lack of experience	27.6
Language barrier	21.3
Lack of transportation	7.9
Lack of education	3.9
Racial/Ethnic discrimination	3.1
Lack of tools	1.6
All other reasons	17.3
Don't know	.8

NOTE: Total exceeds 100 percent because of multiple responses.

SECONDARY POST-PROGRAM ACTIVITIES

About one-sixth of the former trainees reported a current secondary activity in addition to the principal activities discussed above. For more than two-thirds of those reporting a secondary activity, attending a school was subsidiary to working. Only three trainees reported that working was a subsidiary activity to school or training.

As noted above, about 8 percent of former trainees were attending school or training as their main activity at the time of the follow-up survey. If the persons who were attending school or training as a secondary activity are added, this percentage totals nearly 23 percent. That is, more than one in five of the former trainees were attending school or training, either as a main or secondary activity.

SUMMARY AND CONCLUSIONS

Training completion rates were high among the former trainees included in the follow-up sample. About three-quarters of all former trainees and about 90 percent of those who were in Subpart 3 programs reported that they either met their vocational training objectives or remained in the vocational class until its completion. Some of the trainees who did not finish training left in order to take jobs, while personal and family considerations accounted for most of the remaining noncompletions. Fewer than 3 percent of the trainees left because of problems or dissatisfaction with the program.

The former trainees, who on average had left training 36 weeks prior to the follow-up, had spent most of their time working, although about one-fourth of their total time was spent out of the labor force. School attendance or participation in a job training program were the main activities while out of the labor force. At the time of the follow-up survey about 8 percent of the former trainees were in school or additional training as their principal activity and about twice that number were in school or training while their main activity was working.

The rather high incidence of school attendance and enrollment in training programs is attributable to the relatively low occupational skill and educational levels of the former trainees, and indicates that they see value in continuing education and training.

About 30 percent of the former trainees experienced some unemployment after leaving training, and the vast majority of them were unemployed only one time for an average length of about 10 weeks. Overall, those trainees who had been employed since leaving training found their jobs rather quickly; about three-fourths of them found their first job within a week.

While looking for work, former trainees used many sources of job-finding help. The trainees most often found jobs the way surveys indicate repeatedly that most workers do: on their own or with the help of friends and relatives. The next most important sources were placement services of the bilingual vocational training program or vocational skills instructors.

Few "discouraged workers" (that is, workers who stay out of the labor force because of a perceived lack of employment opportunities) were found among the former trainees; the principal reasons for not being in the labor force were personal or family considerations. Former trainees who were in the labor force and who tried but were unable to find work most often attributed their joblessness to economic factors (lack of jobs), although they also cited frequently their own lack of experience and language barriers.

VII. TRAINEE OUTCOMES AND SATISFACTION WITH TRAINING

INTRODUCTION

This chapter contains the findings regarding trainee labor force outcomes; that is, changes from the pre-training to post-training period in unemployment rates, labor force participation rates and job earnings. Former trainees' reports of job satisfaction in the post-program period are presented. Analyses are developed of trainee characteristics and programmatic factors associated with the outcomes. Included also are a presentation and analysis of trainees' reactions to and satisfaction with training and related services received in bilingual vocational training programs.

A summary is included in this chapter of an analysis of changes in trainee English language proficiency between the two interview dates. Since true pre-post measurements of English proficiency were not possible, the analysis is exploratory and the results tentative.

PRE-POST PROGRAM CHANGES IN LABOR FORCE STATUS

Methodology

The method used in this evaluation to ascertain and assess program outcomes is to compare trainees' labor force experience and job earnings throughout the year prior to program entry with a post-program period averaging 9 months. To obtain labor force variables that are sensitive to change (and therefore susceptible to longitudinal analysis), the information from the activity record for each former trainee was calculated for the entire span of the pre- and post-program periods. Thus, each activity was calculated as a percentage of total time available, in weeks. For example, the proportion of time in the labor force yields the average labor force participation rate for the entire period. The average unemployment rate is calculated in a similar manner by dividing the

total time working by the total time in the labor force over the entire period. For pre- and post-program job earnings, the highest weekly earnings for any job in the respective periods were used.[1]

Principal Findings

Favorable changes were achieved for all outcome measures for the overall sample of trainees. The pre-post changes for important outcome variables are shown in Table 18 on the following page.

The salient features of the pre-post changes in labor force status are as follows:

- Average unemployment rate: The average unemployment rate decreased from 22.5 percent to 12.9 percent; a decline of 9.6 percentage points. In percentage terms, the decline in the average unemployment rate was 43 percent. For trainees in Subpart 3 programs, the improvement was even greater; their unemployment rate declined by 58 percent, dropping from 29.8 percent to 12.4 percent.

- Average labor force participation rate: The proportion of total weeks spent in the labor force increased by 14.6 percentage points to 73.9 percent, an increase of 25 percent.

- Employment ratio: The average employment ratio (total weeks working as a proportion of total weeks available) increased from 49 percent to 65 percent, an improvement of about one third. The employment ratio for former Subpart 3 trainees improved more than the average; by about 44 percent.

- Highest weekly job earnings: Highest weekly earnings increased from a mean of about $146 to about $170; an increase of $24 or 16 percent. The improvement in earnings of former Subpart 3 trainees was nearly 30 percent.

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[1] Highest weekly earnings were selected as the truest indicator available of earnings achievement in the labor market. Ending pay (or current pay for ongoing jobs) was used to represent the highest pay, although in some cases it was no higher than beginning pay. Weekly earnings incorporate all types of pay received, including, for example, premium pay for overtime or shift differentials.

Thus, all labor force outcomes were in favorable directions; that is, the directions desired by legislators, program planners and administrators.

Table 18

Comparison of Pre-Program and Post-Program
Labor Force Status Indicators,
By Program Type

Labor Force Status Indicator/Program Type	Period		Pre-Post Change
	Pre-Program	Post-Program	
Average Unemployment Rate:			(in % points):
Subpart 3 (n=86)	29.8%	12.4%	-17.4
Non-Subpart 3 (n=232)	19.8%	13.1%	- 6.7
All Programs (n=318)	22.5%	12.9%	- 9.6
Average Labor Force Participation Rate:			(in % points):
Subpart 3 (n=113)	61.6%	76.6%	+15.0
Non-Subpart 3 (n=353)	58.5%	73.1%	+14.6
All Programs (n=466)	59.3%	73.9%	+14.6
Employment Ratio:[1]			(in % points):
Subpart 3 (n=116)	47.4%	68.2%	+20.8
Non-Subpart 3 (n=356)	49.5%	64.0%	+14.5
All Programs (n=472)	49.0%	65.0%	+16.0
Highest Weekly Job Earnings:[2]			(in dollars):
Subpart 3 (n=50)	$133.94	$173.26	+39.32
Non-Subpart 3 (n=173)	$149.64	$169.17	+19.53
All Programs (n=223)	$146.12	$170.09	+23.97

[1] Proportion of all time employed.
[2] In current dollars.

Outcomes for the Subpart 3 programs consistently were more favorable than for the programs funded from other sources, and the differences in improvements in the average unemployment rate and weekly earnings were statistically significant (at the .01 level) as well as substantial. The analyses of the following sections focus on other variables that are associated favorably with outcomes and attempt to isolate specific trainee or program characteristics that account for differing outcomes.

TRAINEE AND PROGRAMMATIC FACTORS ASSOCIATED WITH OUTCOMES

This section details outcomes for various subgroups of bilingual vocational trainees. Associations are explored of outcomes with both

trainee characteristics (demographic, socioeconomic, language) and programmatic factors. The labor force outcomes discussed in detail are changes in the average unemployment rate and weekly earnings. Changes in the labor force participation rate also are discussed briefly because of the impact of this variable on unemployment rates.

Average Unemployment Rate

Nearly all subgroups of trainees experienced improvements (that is, declines) in the average unemployment rate, although not all groups fared equally well. Pre-post unemployment rate changes for various subgroups of trainees are shown in Table 19.

Among subgroups of trainees which experienced relatively large improvements in the pre-post average unemployment rate were:

- Trainees with high pre-program unemployment rates;
- Puerto Rican-born or Central American-born persons;
- Trainees who spoke "just a few words" of English at the time of the Wave I interview;
- Persons who received more than 240 hours of vocational training;
- Trainees whose mother tongue is classified as "other" (that is, Vietnamese, Navajo, Lakota, Korean, and others);
- Persons who were under 25 years of age before entering the program;
- Persons with fewer than 12 years of education; and
- Trainees from Subpart 3 programs.

Former trainees who were born in Cuba constituted the only group (other than persons with no pre-program unemployment at all) for which the unemployment rate climbed. The Cuban-born trainees in the follow-up

Table 19

Mean Pre-Program, Post-Program And Change In Average Unemployment Rate, Selected Trainee Subgroups

Subgroup Characteristics	Period		Pre-Post Change (in percentage points)
	Pre-Program (in percent)	Post-Program (in percent)	
All Trainees (n=318)	22.5	12.9	- 9.6
Program Type			
Subpart 3 (n=86)	29.8	12.4	-17.4
Non-Subpart 3 (n=232)	19.8	13.1	- 6.7
Sex			
Male (n=149)	20.1	10.0	-10.1
Female (n=169)	24.6	15.5	-9.1
Age[1]			
Under 25 (n=98)	26.6	12.5	-14.1
25-34 (n=103)	19.1	13.6	- 5.5
35 & over (n=116)	22.3	12.7	- 9.6
Mother Tongue			
Spanish (n=226)	22.4	13.7	- 8.7
Chinese (n=49)	16.5	7.4	- 9.1
Other (n=33)	30.0	15.5	-15.5
Country of Birth[2]			
United States (n=60)	32.8	21.6	-11.2
Mexico (n=41)	27.8	12.5	-15.3
Cuba (n=83)	8.8	11.2	+ 2.4
Puerto Rico (n=21)	55.6	14.4	-41.2
Central America (n=19)	30.2	9.2	-21.0
Other Spanish (n=31)	17.4	12.5	- 4.9
China-Hong Kong (n=47)	15.6	6.7	- 8.9
Years Lived in U.S.[1]			
0- 5 (n=121)	24.9	13.3	-11.6
6-15 (n=90)	13.9	5.2	- 8.7
16 & over (n=42)	17.3	16.5	- 0.8
Years of Education (Total)[1]			
0- 6 (n=39)	21.1	12.9	- 8.2
7- 9 (n=66)	27.7	15.0	-12.7
10-11 (n=59)	30.1	15.3	-14.8
12 & over (n=154)	17.7	11.1	- 6.6
Years of English Education[1]			
0 (n=163)	22.2	10.8	-11.4
1- 2 (n=38)	17.4	14.7	- 2.7
3- 4 (n=26)	15.4	11.7	- 3.7
5- 6 (n=8)	9.0	1.5	- 7.5
7- 9 (n=23)	32.1	15.8	-16.3
10-11 (n=25)	36.5	23.9	-12.6
12 & over (n=32)	23.5	15.4	- 8.1
MELP Speaking Rating (Wave I)			
Not At All (n=21)	16.6	8.3	- 8.3
Just a Few Words (n=54)	28.6	10.7	-17.9
More Than a Few Words (n=100)	19.8	11.1	- 8.7
Well (n=102)	25.3	16.3	- 9.0
Very Well (n=40)	16.5	13.9	- 2.6
Training Occupational Area			
Distributive (n=29)	26.0	18.0	- 8.0
Health (n=9)	12.6	2.9	- 9.7
Consumer and Homemaking (n=5)	33.8	1.5	-32.3
Office (n=113)	18.0	13.8	- 4.2
Trade and Industrial (n=162)	25.2	12.3	-12.9
Total Hours of Training			
0- 120 (n=74)	14.0	12.4	- 1.6
121- 240 (n=71)	22.9	16.0	- 6.9
241- 360 (n=58)	24.8	11.2	-13.6
361- 640 (n=69)	30.9	14.1	-16.8
641-1820 (n=39)	22.5	11.1	-11.4
Pre-Program Average Unemployment Rate[1]			
0% (n=191)	0.0	7.2	+ 7.2
1-50% (n=68)	23.2	15.0	- 8.2
51-99% (n=13)	74.9	26.9	-48.0
100% (n=46)	100.0	29.6	-70.4

[1] Pre-program status

[2] Trainees born in Puerto Rico are counted as foreign born because Spanish is the usual language. Trainees did not always differentiate People's Republic of China (mainland China) from Republic of China (Taiwan).

survey had the lowest pre-program unemployment rate (not much higher than the national rate) and even after an increase, their post-program unemployment rate was below the average for all former trainees.[1] The Cuban-born trainees had lived in this country on the average for longer than any other group; many of them have lived here since the early 1960's. They are a more settled, older group than most other trainees; therefore, lack of dramatic changes in labor force status is not unexpected.

A large number of variables are associated significantly with pre-post change in trainee average unemployment rates. (These variables and their correlations with unemployment rate changes are shown in Appendix L.) By far the most important correlates are those measuring the pre-program labor force status of trainees. About half of the variation in unemployment rate change is "explained" by the pre-program rate, and the correlation is negative which indicates (as shown in Table 19) that the greatest improvements were achieved by persons with high pre-program unemployment rates. A similar but somewhat weaker relationship existed between unemployment rate change and the number of spells of unemployment during the year prior to entering training.

Only a few of the trainee variables measuring demographic, socio-economic and language characteristics were associated significantly with pre-post unemployment rate changes. The strongest of these relationships were two countries of birth: Puerto Rico (favorable) and Cuba (unfavorable). Other significant trainee variables were: completion of vocational training course prior to entering bilingual vocational training (unfavorable) and trainee aspiration to "get a job" after leaving training (favorable). The number of weeks that elapsed between the time trainees left the program and when they started on their first post-program job was related unfavorably to unemployment rate changes, indicating the

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[1] As discussed in Appendix B, the Cuban-born trainees in the follow-up survey had lower unemployment rates than for the same group in the initial sample. However, the pre-program unemployment rate of all Cuban-born trainees sampled was well below the average for all trainees (Table D-56, Appendix D.)

importance of finding jobs quickly. Post-program employment in an occupation matched to the training occupation area also had a favorable effect on unemployment rate change.

Several program variables were associated favorably with unemployment rate changes, including the number of different language skills emphasized by ESL instructors, coordination between ESL and vocational instructors, operation of the program by skills centers or regional occupation programs, total hours of vocational training received, and Subpart 3 funding.

Because Subpart 3 programs are more likely than other programs both to enroll trainees with high pre-training unemployment rates and to possess some of the program characteristics associated favorably with unemployment rate changes, an analysis was undertaken to help isolate the effects of trainees' pre-program labor force status. As shown in Appendix L, the correlation of Subpart 3 funding with unemployment rate change is reduced by only about one-third by controlling for the effects of trainee pre-program unemployment rates, indicating that other variables, including programmatic factors, do have some independent effect on unemployment outcomes.

Average Labor Force Participation Rate

Labor force participation by former trainees is important because it is a requisite condition for achieving increased employment and earnings. Changes in the rate of labor force participation of any group can affect the unemployment rate of that group in either of two ways. A person who enters or re-enters the labor force and is unemployed raises the unemployment rate; a new entrant who becomes employed lowers the unemployment rate. As noted earlier, the average labor force participation rate of the former trainees increased by 14.6 percentage points between the pre- and post-program periods, and the increases in employment were sufficient to absorb this increase and still reduce their overall unemployment rate substantially.

The largest changes in the pre-post labor force participation rate were found among the following subgroups:[1]

- Trainees with low (50 percent and lower) pre-program labor force participation rates,
- Puerto Rican-born or Mexican-born trainees,
- Persons who received 361-640 hours of training,
- Trainees who had lived in the U.S. for no more than 5 years,
- Persons under 25 years of age, and
- Trainees with a Chinese mother tongue.

Additionally, the average labor force participation rate for women increased substantially, from 49 percent to 67 percent although it remained far below the post-program rate for men (86 percent).

Cubans had the smallest pre-post change in the average labor force participation rate of any major subgroup of trainees (from 62 percent to 65 percent). The post-program rate for Cubans also was lower than for any other major subgroup.

Highest Weekly Earnings

Former trainees in Subpart 3 programs experienced much greater increases in pre-post weekly job earnings than persons in other programs, both in absolute and percentage terms. As Table 20 shows, the highest weekly earnings of Subpart 3 trainees increased by more than $39 or 29 percent, compared to about $20 and 13 percent, respectively, for trainees in the other programs. During the year prior to entering the program, Subpart 3 trainees on the average earned $16 per week less than other trainees, and after leaving the program they earned $4 more per week.

[1] See Table L-1, Appendix L for additional detail.

Table 20

Mean Pre-Program, Post-Program And Change In Highest Weekly Earnings, Selected Trainee Subgroups

Subgroup Characteristics	Period		Pre-Post Change (in dollars)
	Pre-Program (in current $)	Post-Program (in current $)	
All Trainees (n=223)	146.12	170.09	+23.97
Program Type			
Subpart 3 (n=50)	133.94	173.26	+39.32
Non-Subpart 3 (n=173)	149.64	169.17	+19.53
Sex			
Male (n=109)	168.59	196.04	+27.45
Female (n=114)	124.64	145.27	+20.63
Age[1]			
Under 25 (n=68)	134.18	167.15	+32.97
25-34 (n=69)	148.55	185.14	+36.59
35 & over (n=86)	153.62	160.33	+ 6.71
Mother Tongue			
Spanish (n=169)	150.81	167.81	+17.00
Chinese (n=27)	112.67	183.74	+71.07
Other (n=20)	149.90	177.75	+27.85
Country of Birth[2]			
United States (n=40)	143.85	162.20	+18.35
Mexico (n=33)	154.91	168.70	+13.79
Cuba (n=70)	158.64	166.31	+ 7.67
Puerto Rico (n=11)	124.64	192.27	+67.63
Central America (n=13)	119.69	143.15	+23.46
Other Spanish (n=21)	165.95	187.00	+21.05
China-Hong Kong (n=27)	115.44	186.19	+70.75
Years Lived in U.S.[1]			
0- 5 (n=121)	124.62	171.94	+47.32
6-15 (n=92)	146.73	166.95	+20.22
16 & over (n=42)	187.11	180.78	- 6.33
Years of Education (Total)[1]			
0- 6 (n=39)	132.09	155.50	+23.41
7- 9 (n=66)	131.74	155.29	+23.55
10-11 (n=59)	153.39	186.88	+33.49
12 & over (n=154)	152.35	173.13	+20.78
Years of English Education[1]			
0 (n=163)	142.34	169.58	+27.24
1- 2 (n=38)	152.39	166.00	+13.61
3- 4 (n=26)	139.05	166.25	+27.20
5- 6 (n=8)	130.00	158.83	+28.83
7- 9 (n=23)	153.86	156.00	+ 2.14
10-11 (n=25)	140.56	202.56	+62.00
12 & over (n=32)	153.58	171.12	+17.54
HELP Speaking Rating (Wave I)			
Not At All (n=21)	113.21	147.86	+34.65
Just a Few Words (n=54)	116.31	144.03	+27.72
More Than a Few Words (n=100)	145.60	173.04	+27.44
Well (n=102)	164.79	174.51	+ 9.72
Very Well (n=40)	147.56	187.47	+39.91
Training Occupational Area			
Distributive (n=29)	194.24	205.90	+11.66
Health (n=9)	90.50	154.00	+63.50
Consumer and Homemaking (n=5)	65.25	98.75	+33.50
Office (n=113)	134.86	155.74	+20.88
Trade and Industrial (n=162)	151.15	177.22	+26.07
Total Hours of Training			
0- 120 (n=74)	161.84	169.69	+ 7.85
121- 240 (n=71)	136.94	161.64	+24.70
241- 360 (n=58)	141.97	148.70	+ 6.73
361- 640 (n=69)	139.31	177.49	+38.18
641-1820 (n=39)	147.96	194.85	+46.89
Pre-Program Average Labor Force Participation Rate[1]			
1-50% (n=68)	120.09	158.74	+38.65
51-99% (n=13)	139.63	160.69	+21.06
100% (n=46)	151.16	174.29	+23.13

[1] Pre-program status

[2] Trainees born in Puerto Rico are counted as foreign born because Spanish is the usual language. Trainees did not always differentiate People's Republic of China (mainland China) from Republic of China (Taiwan).

The greatest benefits of the training in terms of increased earnings were realized by trainees who are natives of China or Hong Kong and of Puerto Rico. The next largest gainers in weekly earnings were persons trained in health occupational areas, persons who had 10 or 11 years of English education, and trainees who had lived in the U.S. for no longer than 5 years.

As was the case with unemployment rate change, pre-program status was the primary factor associated with change in weekly earnings. More than one-third of the variation in earnings change was attributable to pre-program earnings, and the relationship was negative as persons with low pre-program earnings gained relatively more than trainees with high initial earnings. The next highest correlate with change in weekly earnings is the number of years trainees had lived in the U.S. This relationship also was negative, indicating that recent immigrants to the U.S. experienced greater relative gains than other trainees.

The number of hours of vocational training received were related positively to earnings changes as were various other programmatic variables, such as vocational-ESL coordination, and the amount of English used by the vocational instructor.

Change in earnings also was related positively to training in occupations with persistently difficult to fill job openings in the local labor market, as well as to whether program officials consulted with employers or used occupational demand or shortage information in their planning.

ANALYSIS OF PROGRAM OUTCOMES

As noted in Chapter II, it is not possible to determine the net effects or impacts on the trainees of participation in bilingual vocational training programs. Determination of net impacts is not possible because of the lack of a "control" or comparison group against which to assess the labor market achievements of the trainees. Despite the absence

of a valid comparison group, it is useful nonetheless to gauge program outcomes against national trends to attempt to assess whether the improvements in trainees' unemployment rates and earnings represent any possible contribution by the bilingual vocational training programs.

During the period from late 1976 until mid-1979[1] aggregate demand was increasing in the U.S. economy and the national unemployment rate declined from 7.5 percent to 5.8 percent. Unemployment rates also decreased in the areas where the former trainees in bilingual vocational programs lived. Former trainees in bilingual vocational training programs experienced a far greater decline in their pre-post unemployment rate than for either the nation or the labor areas in which they lived. (See Table 21.) The average unemployment rate of trainees declined by 43 percent, while the national unemployment rate declined by 23 percent. The unemployment rate for the labor areas in which the trainees were located declined by 9 percent during the same period.[2] Thus, unemployment rate change of the trainees outperformed changes in the national and local unemployment rates by a considerable margin. Moreover, the large improvement in the unemployment rate of trainees was achieved at the same time as their labor force participation rate rose sharply as trainees entered or re-entered the labor force following training.

The average pre-post change in highest weekly job earnings of trainees (from $146 to $170), although less dramatic than the change in the trainee unemployment rate, was substantial nevertheless in comparison with earnings of other U.S. nonsupervisory workers. Earnings changes are shown in Table 21 for nonsupervisory workers in the three industries in which most former trainees work--manufacturing, wholesale and retail trade, and services. Only the workers in manufacturing experienced an

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[1] The periods of September 1976-June 1977, inclusive, and September 1978-June 1979, inclusive, correspond closely to the pre- and post-program periods of the trainees included in this study.

[2] Based on average unemployment rate changes in the 23 labor areas served by the bilingual vocational training programs studied, weighted by the size of each labor area.

Table 21

Unemployment, Earnings and Prices, Selected Groups,
Pre-Program and Post-Program Periods

Indicator	Pre-Program Period	Post-Program Period	Percent Change
Unemployment			
U.S. Unemployment Rate	7.5%	5.8%	-23%
Average Unemployment Rate, 23 Labor Areas Served by Bilingual Vocational Training Programs	6.6%	6.0%	- 9%
Average Unemployment Rate, Bilingual Vocational Trainees	22.5%	12.9%	-43%
Weekly Earnings			
All nonagricultural production/ nonsupervisory workers	$182.59	$212.77	+16.5%
Manufacturing Workers	$218.27	$261.82	+20.0%
Wholesale and Retail Trade Workers	$138.08	$159.54	+15.5%
Service Workers	$152.30	$169.74	+11.5%
Bilingual Vocational Trainees	$146.12	$170.09	+16.4%
Federal Minimum Wage	$2.65/hr	$2.90/hr	+ 9.4%
Consumer Price Index	178.2	209.3	+17.5%

NOTE: Pre-program and post-program periods are September 1976 through June 1977 and September 1978 through June 1979, respectively.

Source: Monthly Labor Review, various issues.

increase in earnings greater than the increase for the former trainees, and the former trainees' earnings increase was virtually the same as for all nonsupervisory workers in all industries combined. (For reference, Table 21 also shows that only workers in manufacturing experienced an increase in real earnings--that is greater than the rise in the Consumer Price Index--and that the trainees as well as the average production workers had flat real earnings.)

Considering that most of the trainees had limited work experience prior to training, the earnings increases they achieved appear to have been influenced favorably by their participation in bilingual vocational training.

It should be reiterated that certain subgroups of trainees, as discussed earlier, fared much better than the average. On the whole, Subpart 3 programs had substantially more favorable unemployment and earnings outcomes, and the probability of favorable program impact appears to be higher for those programs than for those funded under other sources.

SATISFACTION WITH POST-PROGRAM JOBS

Job or work satisfaction is a multi-faceted issue. There are various aspects of any job about which a worker may have different assessments. Moreover, a worker may think differently of any particular job than of her/his occupation. Trainees in the follow-up sample were asked about their overall satisfaction with their most recent post-program job and with 10 specific aspects of the job. Two satisfaction questions related more to their occupation than to their specific job.

More than four-fifths of the former trainees indicated that they were satisfied with their job as a whole, while they were even more frequently satisfied with their working conditions, supervisors and the usefulness and importance of their jobs. (See Table 22.) The lowest

Table 22

Proportions of Former Trainees Who Were Satisfied with Various Aspects of Their Most Recent Post-Program Job and Occupation, Spring-Summer 1979, by Program Type

Satisfaction with:	Program Type		
	Subpart 3 (n=96)	Non-Subpart 3 (n=272)	All Programs (n=368)
Job as a whole	78.1	85.1	83.3
Pay and fringe benefits	70.5	74.9	73.7
Security and permanence	81.1	75.4	77.0
Working conditions	89.6	83.1	84.7
Supervisors	94.6	91.6	92.3
Opportunities for advancement with employer	56.9	62.4	61.0
Opportunity to use past training and education	66.7	70.0	69.1
Opportunity for developing new skills	67.8	74.6	72.7
How work utilizes abilities	78.2	80.8	80.2
How interesting work is	73.4	79.8	78.1
Usefulness and importance of job	85.1	88.9	87.9
Opportunities for advancement in this line of work	61.8	65.9	64.9
Respect received from family/friends by being in this line of work	91.2	90.1	90.4

NOTE: The above percentages of persons who were "satisfied" include those who said they were "satisfied" or "very satisfied." For complete tabulation of responses, see Table M-1, Appendix M.

levels of job satisfaction were reported for opportunities for advancement with their employer, opportunity to use past training and education, opportunity for developing new skills, and pay and fringe benefits.

About 90 percent of the former trainees said that they were satisfied with the respect that they received for being in their line of work. However, only about 65 percent were satisfied with their opportunities for advancement in their line of work.

Slightly higher degrees of job satisfaction on most dimensions were reported by persons formerly enrolled in the non-Subpart 3 programs than those who were in the Subpart 3 programs. However, the former Subpart 3 trainees rated job security/permanence, working conditions and their supervisors higher than did the other trainees. As shown in Table M-1, Appendix M, trainees from the Subpart 3 programs also were less likely than other trainees to express that they were "very satisfied" about particular aspects of their jobs.

The reasons are unknown for differences in reported job satisfaction for the Subpart 3 programs and the other programs. These disparaties may be a consequence of several factors, including the trainees' expectations, cultural differences between the two groups of trainees, and ages of the trainees, as well as "real" differences in jobs. Trainees in the Subpart 3 programs were younger on the average than trainees in the other programs and may have had higher expectations and career ambitions.

Job earnings of the former trainees was correlated positively (and significantly) with most job satisfaction ratings. The only aspects of job satisfaction that were unrelated to pay were the workers' ratings of their supervisors and working conditions. This overall relationship existed despite the fact that one group with relatively high post-program job earnings--trainees of Chinese language background--rated their job satisfaction lower than other groups.

SATISFACTION WITH AND REACTIONS TO TRAINING

During their participation in the program, nearly all of the trainees indicated that they found their training helpful. Ninety-six percent said that their job training was helpful to them, while the same proportion of those who were taking or had taken ESL, said their ESL class was helpful.

Judgments of persons regarding the value or usefulness of training generally are more accurate after they have left the training and had opportunities to apply the skills that they have learned. Generally, trainee satisfaction after leaving the program, is lower than it was during the training. After very long periods of time, the training may become less and less important as new experience and skills are acquired.

Former trainees were asked two questions that required them to assess their training. One of these questions asked how satisfied they were with eight aspects of their job skills training. The other question asked them to assess several aspects of the program in view of their experiences on their most recent post-program jobs.

As shown in Table 23, at least 85 percent of the former trainees expressed satisfaction with 7 of 8 aspects of the program. Only job placement services received lower marks from the former trainees, with one-third of them expressing dissatisfaction.

Very high proportions of former trainees (more than 92 percent) were satisfied with both the ability and the methods of their instructors. Satisfaction with instructors was about equally evident in Subpart 3 programs and other programs, while comparatively more trainees in Subpart 3 programs expressed satisfaction with instructional materials, and tools and equipment.

More than 96 percent of the former trainees agreed with a statement that "getting the training was a wise choice," and most of them (74

Table 23

Proportions of Former Trainees Who Were Satisfied with Various Aspects of Bilingual Vocational Training, Spring-Summer, 1979, by Program Type

Satisfaction with:	Program Type		
	Subpart 3 (n=116)	Non-Subpart 3 (n=352)	All Programs (n=468)
Ability and knowledge of instructors	94.8	94.6	94.6
Way the instructor taught the skills	93.9	91.7	92.2
Tools, equipment, etc.	95.3	89.0	90.6
Instructional materials (written & audio/visual)	92.4	88.8	89.7
Counseling	90.3	86.4	87.4
Job placement	65.0	67.3	66.7
Amount of skills training received	87.8	85.9	86.5
Preparation for a job related to training	91.0	85.5	86.9

NOTE: The above percentages of persons who were "satisfied" include those who said they were "satisfied" or "very satisfied." For complete tabulation of responses, see Table M-2, Appendix M.

percent of the total) agreed strongly. Only 63 percent of trainees who attended Subpart 3 programs agreed strongly with the statement compared to 79 percent of those who were in other programs. (See Table 24.)

About 62 percent of the former trainees agreed with a statement indicating that they would have liked more training before working, and about 65 percent indicated they would have liked more English for their job.

Table 24

Proportions of Former Trainees Who Agreed with Various Statements Regarding Their Most Recent Post-Program Job and Their Bilingual Vocational Training, Spring-Summer 1979, by Program Type

Statement	Favorable (+) Unfavorable (-)	Program Type		
		Subpart 3 (n=97)	Non-Subpart 3 (n=270)	All Programs (n=367)
Training was a wise choice	(+)	95.9	96.6	96.5
Would have liked more training before working	(-)	59.4	62.5	61.7
Able to apply most of what was learned in training	(+)	63.2	66.3	65.5
Training differs from way it's done on job	(-)	59.8	54.2	55.7
Most of what's done on job was learned in training	(+)	54.8	51.8	52.5
Could have got job without training	(-)	46.2	55.2	52.8
Trained with tools or equipment not used on job	(-)	47.8	47.4	47.5
Would have liked more English for this job	(-)	76.9	66.4	69.2

NOTE: The above percentages of persons who "agreed" include those who said that they "agreed" or "strongly agreed." For complete tabulation of responses, see Table M-3, Appendix M. Agreement with statements marked (+) is considered favorable; agreement with those marked (-) is considered unfavorable.

Nearly two-thirds of the trainees said that they were able to apply on the job most of what they learned in training, but only about half agreed that most of what was done on the job was learned in training. Slightly more than half of the trainees agreed that training differed "from the way it's done on the job," but fewer than half said that they were trained with tools or equipment not used on the job.

A majority of the trainees in the Subpart 3 programs said that they could not have gotten their job without their training, although a majority of former trainees of the other programs expressed the opposite view.

CHANGES IN ENGLISH LANGUAGE PROFICIENCY: TENTATIVE FINDINGS

As discussed in Chapter II, pre-post measures of the English language proficiency of trainees in bilingual vocational training were not possible. Trainees' English language proficiency was, however, measured at two points. The Wave I (or initial) measures were made while the trainees were enrolled in bilingual vocational training classes, many of whom had completed a substantial part of their classes as well as any corollary ESL instruction. The initial measures were used to describe and classify the trainees according to their English language proficiency characteristics. (See Chapter III.) The Wave II (or follow-up) measures were made 9 to 13 months later. At the time of the second measures, most of the trainees had been out of the training class for 8 to 11 months. The Wave II measures were used for analyzing the relationships between English language proficiency and use of English on the job.

Although no conclusions can be drawn from the data regarding the impacts of participation in bilingual vocational training programs on the trainees' English language proficiency, the information on changes in proficiency is useful for two purposes. First, since the Wave I English language proficiency measures were made after the trainees had received some English language instruction in their vocational and/or ESL classes, the trainees undoubtedly would have had lower proficiency scores prior to

entering the program. Therefore, the changes observed in English language proficiency, if positive, would represent an underestimate of pre-post gains, but an indication of the probability of whether gains actually were achieved.

The second purpose for which information is useful regarding changes in English language proficiency is that it permits an examination of whether proficiency levels of trainees are maintained for at least several months after leaving the program. Again, the findings can be only tentative since English language proficiency levels as measured during Wave I were probably below the highest levels achieved by the trainees.

On the average, the trainees in bilingual vocational training programs showed gains on their Ilyin Oral Interview scores and on both the MELP understanding and MELP speaking self-ratings. The mean Wave I score on the Ilyin Oral Interview was 51.0 and the mean Wave II score was 59.3, an increase of 16 percent. (See Appendix N.)

The mean Wave I level of the MELP understanding scale was 3.5, or the middle range of the "not well--more than a few words" category, and the mean Wave II level was 3.8, or the high range of that same category. Means of the trainee MELP speaking scores increased from the low range (3.2) to the middle range (3.5) of the "not well--more than a few words" category.

These findings suggest strongly but cannot verify that (1) pre-post gains in trainees' English language proficiency probably did occur, (2) those gains may have been substantial, and (3) a high likelihood exists that English proficiency levels attained while in bilingual vocational training programs were maintained over a period of several months.

SUMMARY AND CONCLUSIONS

The former trainees of bilingual vocational training programs experienced substantial improvements between the pre- and post-program periods in unemployment rates and weekly job earnings. These improvements in unemployment rates and earnings occurred while the labor force participation rate of the trainees increased.

Improvements in the unemployment rate and earnings of the trainees were of sufficient magnitude to make it extremely likely that these changes were the result of participation in the bilingual vocational training programs. The unemployment rate of trainees dropped considerably more than the national rate and more than the average rate for the local labor areas served by the programs. Trainees' weekly job earnings nearly kept pace with inflation, a creditable performance between late 1976 and mid-1979. The trainees' earnings improved at a rate closely comparable to the rate of increase for all nonsupervisory and production workers nationally. The trainees, in comparison with the national labor force, had, prior to entering the program, considerably less work experience, lower educational attainment levels, much lower English language proficiency, and, of course, a higher proportion of racial/ethnic and language minorities. All of these factors place the trainee at a disadvantage in the labor market compared with workers who do not possess these characteristics.

The factors associated most closely with improvements in the unemployment rate and in job earnings were the trainees' pre-program status. Trainees with high pre-program unemployment and low earnings were most likely to have achieved the greatest improvements in these indicators of labor market status. Other variables which contributed to improvements in unemployment rates between the pre- and post-training periods were trainees' expressed aspiration to "get a job" after leaving training, post-program employment in an occupation matched to the training occupational area, increased hours of vocational instruction, increased number

of English language skills emphasized by ESL instructors, coordination of ESL and vocational instruction, and operation of the program by skills centers or regional occupation programs. Trainee subgroups which had the largest declines in the unemployment rate included persons born in Puerto Rico and Central America; persons under 25 years of age before entering the program; trainees who spoke "just a few words" of English at the time of the Wave I interviews; and trainees who had fewer than 12 years of education.

Variables, other than pre-program earnings, which were associated positively with pre-post changes in trainee earnings include total hours of vocational training received, coordination of vocational and ESL instruction, amount of English used by the vocational instructor, training in occupations with difficult-to-fill job openings in the local labor market, consultation with employers and use of occupational demand or shortage information in program planning. The number of years of residency in the U.S. was related negatively to earnings gains, indicating that recent immigrants to the U.S. experienced greater relative gains than other trainees. Trainee subgroups with relatively large pre-post earnings gains were: persons with Chinese as a mother tongue and persons born in Puerto Rico, as well as recent immigrants to the U.S. There is considerable overlap among these groups: a majority of the Chinese speakers had lived in this country for less than two years at the time of the Wave I interview, and many Puerto Ricans were new to the mainland.

The trainees born in Puerto Rico, many of whom were young, experienced large relative improvements both in unemployment rates and earnings. Trainees with high numbers of hours of vocational training also did well on both of these indicators. Trainees in classes for which the vocational and ESL instruction were coordinated also experienced comparatively large improvements in both the unemployment rate and earnings. Trainees born in Cuba were the only subgroup of trainees which did not experience any appreciable degree of improvement in the unemployment rate and job earnings; in fact, their unemployment rate increased slightly. The

Cuban-born trainees are an older, more settled group than other trainees and dramatic changes in labor force status probably could not have been expected.

Trainees in Subpart 3 programs consistently had more favorable outcomes in terms of employment and job earnings than persons in the other programs. These comparatively more favorable outcomes result both from (1) enrollment of trainees who benefit most from bilingual vocational training (those with high unemployment and low earnings), and (2) certain program operating features, particularly the use of employers and labor market and occupational data in program planning, and coordination of vocational and ESL instruction.

More than four-fifths of the former trainees were satisfied overall with their post-program jobs. Satisfaction ratings for specific aspects of jobs varied considerably. The highest levels of satisfaction were reported for working conditions, supervisors and the usefulness and importance of the job. The lowest levels of satisfaction were reported for pay and fringe benefits, and for opportunities for (1) advancement with their employer, (2) developing new skills, and (3) using past training and education. Thus, trainees appeared to be more satisfied with their immediate job situation than with their prospects for advancement.

High proportions of former trainees expressed satisfaction with their experience in bilingual vocational training programs. At least 85 percent of the former trainees expressed satisfaction with various aspects of the program; only job placement services received a lower rating with one-third of the trainees expressing dissatisfaction with this service. A very high percentage (more than 92 percent) of the trainees were satisfied with both the ability and the methods of their instructors.

More than 60 percent of the former trainees indicated that they would have liked (1) more training before they started working, and (2)

more English for their job. About half of them agreed that most of what was done on the job was learned in training, and nearly two-thirds said that they were able to apply on the job most of what they learned in training.

Overall, trainees in Subpart 3 programs, who achieved greater improvements in labor force status than other trainees, according to objective indicators, had slightly lower levels of job and training satisfaction. These differences were not large but sufficient to suggest that expectations of Subpart 3 trainees may have been higher than for other trainees.

Improvements occurred in the English language proficiency of the trainees between the time they were enrolled in the program and several months after leaving the program. Although it was not possible to assess trainees' pre-post English language proficiency changes, the data suggest that such gains probably occurred and that all or some portion of the proficiency gains were maintained for several months after leaving training.

The bilingual vocational training programs have been effective in helping to reduce unemployment and to increase job earnings of the limited English-speaking trainees. The programs have been effective across a rather wide spectrum of geographic areas, trainee groups and occupational skill areas, indicating that the programs have considerable potential for helping to alleviate the employment problems of limited English-speaking adults.

VIII. CHARACTERISTICS OF OCCUPATIONS

INTRODUCTION

Bilingual vocational training programs prepare adult trainees for work in varied occupations. The discussions of this chapter focus on the degree to which post-program occupations are related to the training occupational areas, estimated demand and shortage factors in the various occupations, and the amount and types of English needed in post-program jobs in various occupations. Also presented in this chapter is a comparison of English needs on the job as reported by the former trainees and the emphasis on the various English skills as taught in the bilingual vocational training programs.

Examinations are also made in this chapter of the relationships of occupations of employment with (1) former trainees' English language proficiency, (2) English needs on the job, and (3) labor force outcomes.

CORRESPONDENCE OF POST-PROGRAM AND TRAINING OCCUPATIONS

An indicator of program effectiveness is the extent to which post-program jobs are related to the training received. A match of training received and post-training jobs held indicates that program planning and design were relevant to labor market and trainee needs. Also, as discussed in Chapter VII, trainees who worked in jobs matched to their training areas experienced greater improvements in the unemployment rate than those employed in non-related jobs.

Determination of Training-Related Occupations

Each of the vocational instructors was asked: "For what specific occupations or kinds of jobs are your students being trained?" The responses were converted to the codes used in the Dictionary of Occupational Titles (DOT). (Post-program jobs also received DOT codes, based

on the former trainees' descriptions of the tasks performed.) An instructor's response was used for each of the trainees in the class. When specific occupations were not supplied by the instructor, they were based on the course title and/or descriptions.[1]

Training-related jobs are defined only in terms of occupations, rather than industries. An industry is defined by its products or services provided, an occupation by the content of the work performed. Although some occupations are restricted to one or a few related industries other occupations can be found in all industries. Sewing machine operators, for example, are employed in only a few industries, while bookkeepers or secretaries are employed in a wide variety of industries.[2]

Correspondence of Post-Program Jobs to Training Occupational Areas

About one-third (33.5 percent) of the most recent jobs held by the former trainees were related closely to their training occupational areas (Table 25).[3] Trainees from Subpart 3 programs were less likely to find jobs that were related to their training than were trainees from

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[1]For some training occupational areas, there was a one-to-one correspondence with the DOT codes, such as welders, machinists and auto mechanics. For other occupational areas, several DOT codes were used; for example, trainees in apparel manufacturing/sewing machine operators were being trained to work in the fabrication, repair, and assembly of textiles, for both garment and non-garment industries. Job titles included tailors, seamstresses and dressmakers, as well as sewing machine operators.

[2]Post-program jobs of former trainees were concentrated principally in manufacturing (35 percent of the total), services (25 percent), and wholesale and retail trade (19 percent). All other industries combined accounted for only 21 percent of the total.

[3]A slightly higher proportion (35.4 percent) of the trainees' first jobs after leaving the program matched their training occupational areas. Three-fourths of the trainees had had only one job since leaving the program.

Table 25

Percent of Trainees Whose Current/Most Recent Job and First Job after Training Matched Their Training Occupation, by Training Occupational Area

Training Occupational Area	Trainees with Post-Program Jobs	Percent Matched, Current/Most Recent Job	Percent Matched, First Job After Leaving Training
• *DISTRIBUTION*	*28*	*21.4*	*21.4*
Banking & Finance	4	-0-	-0-
Export-Import	16	6.3	6.3
Distributive Ed./Business Training	8	62.5	62.5
• *HEALTH*	*12*	*58.3*	*58.3*
Dental Assisting	2	100.0	100.0
Home Health Aide/Health Assistant	10	50.0	50.0
• *CONSUMER AND HOMEMAKING*	*7*	*42.9*	*57.1*
Hospitality Services	2	-0-	-0-
Housekeeping	5	60.0	80.0
• *OFFICE OCCUPATIONS*	*141*	*22.7*	*23.4*
Clerical/Medical Ofc. Skills/Gen. Ofc.	58	32.8	34.5
Accounting/Income Tax/Bookkeeping	29	37.9	37.9
Keypunch/Data Processing	15	-0-	-0-
Bilingual Secretary	2	50.0	50.0
Typing	35	2.9	2.9
Paralegal	2	-0-	-0-
• *TRADE AND INDUSTRIAL*	*185*	*41.6*	*44.3*
Air Cond. & Refrig./Electronics-A.C. Repair	9	11.1	22.2
Sewing Machine Repair Mechanic	4	75.0	75.0
Auto Body & Fender	2	-0-	50.0
Auto Mechanics	11	18.2	27.3
Auto Svcs: Brakes, Front End, Tune-Up	17	35.3	41.2
Building/Construction Trades	6	16.7	16.7
Electronics Assembly	10	70.0	70.0
Building Trades Foremen	7	57.1	42.9
Machine Shop	21	28.6	23.8
Welding	22	40.9	50.0
Cosmetology	1	-0-	-0-
Plastics	5	20.0	-0-
Culinary Arts/Professional Chef	17	41.2	41.2
Small Engine Repair	1	-0-	-0-
Apparel Mfg./Sewing Machine Oper.	47	63.8	68.1
Upholstering	5	-0-	-0-
TOTAL - ALL OCCUPATIONS	*373*	*33.5*	*36.4*

other programs. (See Table O-1, Appendix O.) Three of the four occupational areas with the highest proportions of jobs matched with training--electronics assembly, sewing machine repair and sewing machine operator--were offered only in non-Subpart 3 programs, and the proportion of matched jobs was about equal between the two types of programs for all other occupational areas combined.

More than two-fifths of the trainees from the health, consumer/homemaking, and trade/industrial occupational areas found jobs related to their training. Trainees from distribution and office occupational areas were less likely than other trainees to find training-related jobs (less than one-fourth in each of these occupational areas).

Training in the fields of dental assisting, sewing machine repair mechanic, electronics assembly, apparel manufacturing/sewing machine operator, distributive education/business training, and housekeeping resulted in related post-program jobs for at least three-fifths of the trainees. Trainees from seven occupational areas were unable to find jobs related to their training; however, they accounted for only 8 percent of the trainees with post-program jobs. Two-thirds of these individuals had received training in keypunch/data processing or upholstering.

The probability of a trainee becoming employed in a training-related occupation, according to a correlation analysis, was associated

- negatively with community size--as the size of the labor area increased, the proportion of trainees working in matching occupations declined;
- positively with the existence of joint program planning by program officials and employers;
- positively with the total hours of vocational training received.

It appears that the first two factors are related; that is, community size and opportunities for involvement of employers in program planning. The opportunities may be wider in small and medium-sized cities for (1) identifying the demand for labor through employers, (2) job development and placement activities, and (3) involving employers in various aspects of program planning. Identification of the appropriate employers and development of productive relationships with them in large cities may be more difficult than in smaller cities.

As a result of working in a related occupation, trainees were more satisfied with various aspects of their bilingual vocational training and of their most recent post-program jobs and occupations. The aspects most highly correlated were directly relevant to the appropriateness of training:

- most of what's done on job was learned in training (r=+.45)
- able to apply most of what was learned in training (r=+.40)
- could have got job without training (r=-.30)
- opportunity to use past training and education (r=+.27)
- program job placement services (r=+.25)
- opportunity for developing new skills (r=+.19)
- job as a whole (r=+.18)

Working in a job related to training was not significantly associated with satisfaction with various aspects of the work environment, such as pay and fringe benefits, supervisors, working conditions, or security and permanence.

OCCUPATIONAL DEMAND AND SHORTAGE FACTORS

Demand for occupational skills is an obviously important factor in vocational training program planning. As discussed in Chapter IV, most program directors claimed to have considered demand for specific occupational skills in program planning. The effectiveness of that planning is reflected partly in the proportion of trainees who found employment in a training-related occupation. However, many factors other than demand can affect

occupational choice of a trainee--for example, attractive job openings in another occupation; temporary contraction of demand generally or in a specific occupation; shift of trainees' aspirations or occupational preference; and so on. As discussed in the preceding section, about one-third of the trainees who had worked after leaving the program were working in jobs related closely to their training. Since a large number of variables can affect occupational choice, the proportion of post-program jobs related to training conceivably could have been even lower than one-third without adequate attention to occupational demand factors in the planning and design of the bilingual vocational training programs.

The Congress stated in the Subpart 3 legislation that limited English-speaking persons, because of their lack of English capability, are "unable to help to fill the critical need for more and better educated personnel in vital occupational categories..."[1] The Congress also stated that the evaluation of bilingual vocational training should include the "impact of such...training on the shortages of well-trained personnel..."[2] Congressional references to "critical" need, "vital" occupations and personnel "shortages" signify clearly that the lawmakers desired that bilingual vocational training focus on training for occupations in high demand, particularly those for which skills shortages exist.

The size of the bilingual vocational training effort to date is far too small to assess the impact of such training on occupational skills shortages.[3] The impact of bilingual vocational training on the supply

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[1] P.L. 94-482, Subpart 3, Section 181.

[2] Ibid. Section 182(a)(2).

[3] For example, in fiscal year 1979, the Subpart 3 program was designed to train about 700 limited English-speaking persons. As noted in Chapter I, it is estimated that only about 8,700 trainees were enrolled in all bilingual vocational training programs, excluding programs funded under CETA but including all of the various other programs that were not studied as part of this evaluation.

of skilled labor in any particular occupation nationally would be barely perceptible. Based on the labor market data examined for the analysis below, it is doubtful that a sufficient number of persons have been trained in any particular occupation in any labor area for bilingual vocational training to have had an appreciable effect on skills shortages in local labor markets. Therefore, the analysis that follows focuses on the potential, not the actuality, of bilingual vocational training to help alleviate occupational skills shortages.

Delineation of Demand and Potential Shortage Occupations

Valid and consistently available data do not exist that indicate occupational skills shortages.[1] Apart from special surveys and studies that have been done from time to time for some local areas, only indirect indicators exist of skills shortages in local labor markets. An example of an indirect indicator is the number and duration of want ads for an occupation. This source suffers from obvious shortcomings: employers often do not use classified ads to help fill job openings and advertised openings do not necessarily result from skills shortages. Another source, which shares essentially these same shortcomings but to a lesser degree, was used for this study: unfilled job orders of the public employment service. The public employment service does not receive all job orders from employers in any area, and the proportion of all job orders received varies widely from area to area. Firms holding government contracts are required, however, to list job openings with the public employment service. Moreover, the public employment service,

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[1] See Dale W. Berry, et al., Assessment of the Status of Bilingual Vocational Training for Adults: Evaluation Feasibility and Design Study (Final Report--Phase II), A Report Prepared for the Office of Education, U.S. Department of Health, Education, and Welfare (Albuquerque: Kirschner Associates, Inc., 1976), pp. 11-14; and Olympus Research Corporation, Evaluation of the Effectiveness of Institutional Manpower Training in Meeting Employers' Needs in Skills Shortage Occupations, A Report Prepared for the Manpower Administration, U.S. Department of Labor (Salt Lake City: Olympus Research Corporation, 1972).

through its Job Bank System, tabulates monthly figures for each occupation of all job orders received, job orders unfilled at the end of the month, and those orders that at the end of month were unfilled for 30 days or more. The latter category indicates job openings that are difficult to fill.

Job openings may occur for various reasons besides a lack of labor supply. Among the most common reasons is employee turnover. Turnover may result from, among other factors, unsatisfactory pay and working conditions. Other jobs that are hard to fill may be characterized by lack of skill content and resultant low wages. Day-to-day variations in job openings also may occur for a variety of reasons that do not accurately reflect trends over a period of time.

Although job openings, even difficult-to-fill openings, do not necessarily reflect skills shortages, it is highly likely that skills shortages are responsible for some of the difficult-to-fill openings. Since the reasons why the jobs cannot be filled are not known, occupations with persistently high proportions of difficult-to-fill openings are referred to as "demand" occupations rather than "shortage" occupations.

The data from the Job Bank System were used in the following manner:

- Difficult-to-fill job orders (that is, unfilled for 30 days or more) were examined for each occupation corresponding to the occupational skills areas offered by the bilingual vocational training programs in each labor area for which the Job Bank data were available. Such data were available for 13 of the 23 labor areas served by the bilingual vocational training programs. The remaining areas did not have an operative Job Bank System or they were small areas included in very large Job Bank areas that extended far beyond commuting range.

- The time period covered was 7 months, from October 1978 to April 1979, inclusive. A longer time frame would have been desirable, but prior to October 1978 the occupational categories were defined in a less detailed manner and tabulations were not strictly comparable after that date.

- An occupation was classified as a "demand" occupation if its ratio of job openings of more than 30 days at the end of a month to all job openings during a month (averaged over the 7-month period) exceeded the same ratio for all occupations combined in that area. A similar classification was made for the nation based on aggregate figures of the entire Job Bank System.

In addition to data regarding current or past demand/supply factors for various occupations, potential skills shortages can be assessed by examining expected trends in employment by occupation. Skills shortages are most likely, of course, to develop in occupations with rapidly increasing numbers of job openings although shortages may be avoided if an adequate training effort exists. Change in the number of job openings in an occupation result from two factors: (1) replacement of workers who retire or die, and (2) growth of demand for new workers. Only when the growth of job openings from both of these sources combined exceeds the trained supply of workers in an occupation will a skills shortage exist.

Projected trends were obtained of job openings and employment for the occupations for which bilingual vocational training programs offered skills training in 1978. Two sources were reviewed: (1) The Conference Board, a business research organization,[1] and (2) the Bureau of Labor Statistics, U.S. Department of Labor.[2] The Conference Board projections are slightly out of date; therefore, the Bureau of Labor Statistics data are used for identifying potential "shortage" occupations (that is, occupations expected to experience higher than average growth in number of annual job openings over the 10-year period 1976 to 1985, inclusive).

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[1] Leonard A. Lecht, et al., Changes in Occupational Characteristics: Planning Ahead for the 1980's (New York: The Conference Board, 1976).

[2] See, for example, Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 1978-79 Edition, BLS Bulletin 1955 (Washington: Government Printing Office, 1978); and Occupational Projections and Training Data, BLS Bulletin 2020, 1979. Actual data used were the latest revised and unpublished projections provided by BSL as of August 1979.

The occupations, from among those offered by bilingual vocational training programs in 1978, that are defined, by the methods noted above, as "demand" occupations nationally or in a local labor area in which the skill is offered by a bilingual vocational training program are shown in Table 26 on the following page. Shown also are the occupations designated as potential "shortage" occupations nationally because of expected growth of job openings.[1]

As shown in Table 26, there is considerable overlap between the national and local "demand" occupations lists. The principal differences are (1) professional chef, cosmetology and data processing occupations appear on the national list but not on the local list; and (2) dental assisting, typing and clerical occupations appear only on the local list.

About half of the "demand" occupations also appear on the list of potential "shortage" occupations. These occupations appear to be the most likely to have experienced shortages recently and include home health aide, health assistant, dental assistant, paralegal aide, air conditioning and refrigeration repair person, professional chef, and clerical occupations. It appears that other occupations may have experienced high demand either because of real shortages in some areas or because of turnover in jobs. These latter occupations include auto mechanic, sewing machine operator, machinist, keypunch operator and upholsterer.

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[1]The occupational categories used by the Bureau of Labor Statistics for the projections of job openings are those of the Bureau of the Census and they differ somewhat from the DOT categories. Because of these discrepancies, some judgment was involved in adapting some of the Census codes to the DOT codes. For example, "paralegal aide" does not exist in the Census occupational classifications; therefore, this category combined the growth rates for lawyers and a miscellaneous clerical category. Separate categories are not provided in the Census classifications for home health aides or professional chef; therefore, these occupations were assumed to be represented by health assistant and cook.

Table 26

Listing of Selected "Demand" and Potential "Shortage" Occupations
for Which Bilingual Vocational Training Programs Offered Skills Training,
Spring - Summer 1978

"Demand" Occupations Nationally[1]	"Demand" Occupations, Selected Labor Areas[1]	Potential "Shortage" Occupations Nationally[2]
Machinist	Home Health Aide	Paralegal Aide
Cosmetologist	Paralegal Aide	Air Conditioning & Refrigeration Repair
Home Health Aide	Machinist	Health Assistant/Home Health Aide
Air Conditioning & Refrigeration Repair	Health Assistant	Dental Assistant
Paralegal Aide	Sewing Machine Operator	Cashier
Sewing Machine Operator	Air Conditioning & Refrigeration Repair	Office Occupations: Medical Secretary, Secretary, Typist, Receptionist, Misc. Office Occupations
Auto Mechanic	Upholsterer	Electronics Assembler
Keypunch Operator	Dental Assistant	Professional Chef/Cook
Professional Chef	Keypunch Operator	Welder
Upholsterer	Auto Mechanic	Food Service/Hospital Service Worker
Health Assistant	Clerical Occupations	Carpenter/Carpenter's Helper
Data Processing	Typist	Bank Teller

[1] National listing based on persistently difficult-to-fill job openings during the period October 1978-April 1979 in occupations for which bilingual vocational training programs provided vocational skills training in Spring-Summer 1978. Local listing based on similar data, restricted to 13 of the 23 labor areas served by bilingual vocational training programs. Both listings contain occupations ranked from highest to lowest according to the ratio of job openings unfilled for 30 days or more to all job openings for occupations in which that ratio exceeded the average for all occupations. All data from detailed unpublished microfiche data, Job Bank Opening Summaries, Office of Technical Support, U.S. Employment Service, Employment and Training Administration, U.S. Department of Labor.

[2] Derived from projections of annual average job openings, by occupation, during the period 1976-1985. Listing includes all occupations with above average projected growth rates for which skills training was offered in bilingual vocational training programs in Spring-Summer 1978. Occupations are listed in approximate rank order of projected growth. Unpublished source data obtained from Bureau of Labor Statistics, U.S. Department of Labor.

The occupations listed in Table 26 represent about half of all of the training occupational areas offered by the bilingual vocational training programs studied. Thus, the programs have demonstrated an ability to identify "demand" and "potential shortage" occupations and to provide training for those occupations to limited English-speaking persons. Not all of the persons who were trained in the "demand" or potential "shortage" occupations found employment in those occupations after leaving the program, however. In fact, changes in the pre-post average unemployment rates of trainees were unaffected by whether training was in one of those occupations. However, as noted in Chapter VII, pre-post changes in weekly earnings were higher for persons trained in local "demand" occupations than for trainees in other fields.

ENGLISH NEEDS IN POST-PROGRAM OCCUPATIONS

Information was obtained from trainees who had worked after leaving the program regarding the need for English use for various purposes on their most recent job. The need for English use on the job was obtained for each of 10 types of communication, including oral, reading and writing skills. The trainees were asked how much English--"Quite a bit," "Some," "A little," or "None"--they had to use for the various purposes on the job. Their responses are directly comparable to those of vocational and ESL instructors who were asked how much emphasis they placed on teaching each of the 10 English language skills. Thus, it is possible to estimate whether the instructors' emphasis on English skills was appropriate to on-the-job English needs. A limitation of the information is that it excludes the overall need for the communication skill, apart from the need for English. For example, it is not known always whether certain language skills or only English language skills are needed in particular occupations.

The amounts of English used and the purposes for which it was used varied by occupation, trainees' English language ability and mother tongue. The patterns of English use on the job conformed generally with the emphasis placed on various aspects of English by the vocational and

ESL instructors. (See Chapter V for a discussion of English skills taught in vocational and ESL classes.)

More than half of the trainees needed to use English at least "some" for three of the four oral language skills--communicating with the public in person, with supervisors, and with fellow employers--and for one of the reading skills--reading instructions and directions. (See Table 27.) The English language skill that was needed the least by the trainees on their jobs was writing narratives or descriptive passages; more than two-thirds of the trainees never had to use this skill. More than two-fifths of the trainees never needed to use English for any of the written skills, two of the reading skills, or one of the oral skills.

Table 27

Percentage of Trainees Who Need to Use English on Their Most Recent Post-Program Job

English Language Skill	n	Amount of English Used				
		Quite a Bit	Some	A Little	None	Total
Communicating With the Public In Person	373	34.6	16.1	16.3	33.0	100.0
Telephone Contacts	372	26.1	11.8	15.6	46.5	100.0
Communicating With Supervisors	371	44.2	17.8	11.9	26.1	100.0
Communicating With Fellow Employers	369	33.9	19.8	13.8	32.5	100.0
Reading Instructions, Directions	371	38.5	16.7	14.3	30.5	100.0
Using Manuals As A Reference	370	29.5	13.2	11.6	45.7	100.0
Reading Diagrams	371	21.9	9.4	8.9	59.8	100.0
Filling Out Forms	371	31.3	14.8	10.2	43.7	100.0
Writing Simple Statements	372	24.5	15.3	12.1	48.1	100.0
Writing Narratives/ Descriptive Passages	371	15.1	6.5	9.7	68.7	100.0

The fact that some former trainees did not need English for all aspects of their post-program jobs indicates that some work environments are not totally English speaking. Since nearly all jobs include communication with supervisors and with fellow employees, the degree that former trainees needed English for these forms of communication provides an indication of the job language environment. Fewer than half (about 45 percent) of the trainees reported that they needed to use English "quite a bit" for communicating with their supervisors and only one-third needed to use English "quite a bit" to communicate with their fellow employees. In response to a separate question, 67 percent of the former trainees reported that their usual language spoken with their supervisor was English, while about 60 percent usually spoke English with fellow employees. (See Table P-1, Appendix P.)

The post-program occupations for bilingual vocational trainees encompass a wide variety of fields. Prior to discussing the amounts of English required in various occupations it is useful to gain an idea of the types and breadth of occupations involved. Some of the types of jobs include:[1]

- Professional, technical, managerial: dental assistants, accountants, teaching aides;
- Clerical and sales: secretaries, typists, file clerks, bookkeepers, cashiers, stock clerks, receptionists, salespersons;
- Service: cooks, kitchen workers, housekeepers, health assistants, porters;
- Farming, fishery, forestry: groundskeepers, general farmworkers, cotton ginners;
- Processing: chromeplaters, foundry inspectors, cannery workers, factory workers;

[1] See detailed listing in Appendix O of all post-program occupations for former trainees.

- Machine trades: machine operators, auto mechanics, air conditioning and refrigeration repair persons, sewing machine/appliance repair mechanics;
- Bench work: upholsterers, sewing machine operators, electronics assemblers;
- Structural: welders, auto body repair persons, plumbers, construction workers; and,
- Miscellaneous: packagers, truck drivers, gas station attendants.

Trainees working in professional/technical and clerical/sales occupations needed to use English more frequently than other trainees for all of the language skills, while trainees in service and bench work occupations (especially in textiles) had to use English the least of all trainees. (See Table P-2, Appendix P.) Communicating with supervisors, a skill that was needed "quite a bit" by approximately two-fifths of all trainees, was used by more than half of the trainees working in machine trades, structural, clerical/sales, and professional/technical occupations.

Of the reading skills, trainees most often needed to read instructions and directions in English, especially those working in professional/technical, clerical/sales and machine trades occupations. More than twice the number of trainees working in professional/technical occupations had to use English for the written skills than all other trainees.

As expected, English use also varied with the trainees' proficiency in English, as shown when measured by the MELP speaking rating. (See Table P-3, Appendix P.) That is, as a trainee's level of English proficiency increased, the trainee's use of English on the job also increased. Less than one-eighth of the trainees who rated their English language ability as "not well--just a few words" needed to use English at least "some" for any of the language skills. Trainees with MELP speaking ratings of "very well" needed to use English more than one-and-a-half times as often as all other trainees for each of the communication skills.

The use of English on the job also varied by language group. Trainees in the Chinese language group needed to use English on their jobs less than all other trainees for every skill. (See Table P-4, Appendix P.) The skill for which these trainees used English the most was communicating with supervisors (24 percent, compared to 44 percent for all trainees)--the skill all trainees needed to use more than the other skills. Since the Chinese language group, on the average, had the lowest English proficiency levels (see Chapter III), it was expected that the use of English by this group would also be the lowest.

A comparison of the degree of emphasis that vocational and ESL instructors placed on selected language skills with the amount that trainees needed to use these skills in their post-program occupations indicates that both types of instructors generally were able to assess accurately the English needs of the trainees on the job. However, there was some variance in the degree to which each type of instructor emphasized the different skills, which was reflected in the relationship between the instructors' and trainees' responses, as shown in Table 28.[1]

The language skill that was emphasized the least by both types of instructors (mean=2.2 or "a little") and that was needed the least by trainees on the job (mean = 1.7 or "a little") was writing narratives or descriptive passages. The degree to which the instructors thought this skill would be needed on the job and the amount that trainees did need to use the skill varied little by occupation. (See Table P-5, Appendix P.)

Two of the oral skills--communicating with supervisors and with fellow employees--were the two skills assessed most accurately by the instructors; the mean for the three types of respondents was "some."

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[1] Means were calculated for the instructors' and trainees' responses based on the four categories of emphasis and usage: 4.0 = quite a bit; 3.0 = some; 2.0 = a little; and 1.0 = none.

Table 28

Degree of Emphasis Placed On
Selected English Language Skills By
Vocational and ESL Instructors and of Amount Trainees
Need to Use These Skills on the Job
(means)

English Language Skill	Type of Respondent		
	Vocational Instructors (n=107)	ESL Instructors (n=45)	Trainees (n=373)
Communicating With the Public In Person	3.1	3.9	2.5
Telephone Contacts	2.8	3.4	2.2
Communicating With Supervisors	3.4	3.0	2.8
Communicating With Fellow Employers	3.2	2.9	2.6
Reading Instructions, Directions	3.6	3.2	2.7
Using Manuals As A Reference	3.3	2.4	2.3
Reading Diagrams	3.0	2.6	1.9
Filling Out Forms	3.0	2.9	2.4
Writing Simple Statements	2.7	3.0	2.2
Writing Narratives/ Descriptive Passages	2.2	2.2	1.7

NOTE: Means defined by the following categories of emphasis and use:

4.0 = Quite a bit
3.0 = Some
2.0 = A little
1.0 = None

The vocational instructors emphasized these skills slightly more than the ESL instructors (except instructors representing distribution occupations), and slightly more than the trainees needed to use the skills (except for office occupations). ESL instructors, conversely, emphasized the other two oral skills somewhat more than the vocational instructors and more than the trainees needed these skills in each occupational area.

Both types of instructors overemphasized one of the reading skills--reading diagrams--and, in general, vocational instructors placed more emphasis on all of the reading skills than did ESL instructors. The

greatest difference was that ESL instructors representing health occupations placed more emphasis on reading diagrams and using manuals than vocational instructors and more than trainees needed to use these skills.

POST-PROGRAM OCCUPATIONS, ENGLISH PROFICIENCY AND LABOR FORCE STATUS

To supplement the information above on specific English language needs on the job in various occupations as reported by trainees, the relationship of English language proficiency and occupations of employment was examined also. As discussed in the preceding section, the amount and types of English needed on the job varied both by occupation and by the former trainees' English proficiency. And, as shown below, some variation existed in English language proficiency among occupations. These relationships are examined to determine whether employment and earnings in any occupations appeared to be influenced by English proficiency.

English Language Proficiency and Post-Program Occupations

Former trainees of bilingual vocational training programs with the highest levels of English language proficiency were most likely to be employed in professional/technical, clerical/sales, machine trades, and structural occupations. (See Table 29.) The lowest average levels of English language proficiency among employed former trainees were for those working in bench work, processing and services occupations.

The mean levels of English language proficiency of former trainees working in machine trades (mechanics, machine repair) and structural (welding, construction) occupations were nearly as high as for those working in clerical and sales occupations.

Table 29

Ranking of Most Recent Post-Program
Occupations by Trainees' Mean Proficiency
Ratings in Speaking English

Occupation	n	Mean Wave II MELP Speaking Rating
Professional, Technical	20	4.2
Clerical & Sales	118	4.0
Machine Trades	41	3.9
Structural	38	3.9
ALL OCCUPATIONS	370	3.6
Miscellaneous	24	3.6
Services	61	3.0
Processing	7	3.0
Bench Work	58	2.9

NOTE: 1.0 = Not at All
2.0 = Not well - Just a Few Words
3.0 = Not Well - More Than a Few Words
4.0 = Well
5.0 = Very Well

Relationships of English Proficiency and Labor Force Status

On an overall basis, levels of English language proficiency were associated positively with post-program job earnings of former trainees;[1] however, language proficiency was not associated significantly with pre-post changes in either weekly job earnings or the average unemployment rate.

In general, the former trainees who rated their ability to speak English as "well" or "very well" after leaving the program had higher post-program job earnings than trainees with lower levels of English proficiency (Table 30). High English proficiency was associated with high earnings most strongly in machine trades and bench work occupations. Earnings did not vary with English proficiency levels in clerical/sales, services and structural occupations.

[1] See Appendix Q.

Table 30

Post Program and Pre-Post Changes of Trainee Earnings and Average Unemployment Rates, By Post-Program Occupation and Post-Program Proficiency in Speaking English (means)

Most Recent Post-Program Occupation and Wave II MELP Speaking Rating	Highest Weekly Earnings				Average Unemployment Rate			
	Pre-Post Change		Most Recent Job		Pre-Post Change		Post-Program	
	n	mean($)	n	mean($)	n	mean(% pts)	n	mean(%)
Professional, Technical	*12*	*+32.33*	*20*	*177.55*	*18*	*-17.4*	*20*	*6.0*
Not Well/Not at All	3	*	4	*	4	*	4	*
Well/Very Well	9	+38.78	16	189.06	14	-24.4	16	5.2
Clerical and Sales	*70*	*+16.54*	*117*	*148.13*	*93*	*-10.6*	*118*	*8.6*
Not Well/Not at All	9	+17.78	22	151.95	18	-25.3	22	4.8
Well/Very Well	61	+16.36	95	147.24	75	- 7.1	96	9.4
Services	*33*	*+35.33*	*53*	*147.73*	*48*	*-16.3*	*61*	*5.0*
Not Well/Not at All	22	+48.41	41	147.71	34	-17.6	44	6.1
Well/Very Well	11	+ 9.18	18	147.77	14	-14.9	17	2.2
Processing	*3*	*	*7*	*193.43*	*4*	*	*7*	*10.7*
Not Well/Not at All	1	*	4	*	2	*	4	*
Well/Very Well	2	*	3	*	2	*	3	*
Machine Trades	*26*	*+29.36*	*41*	*191.73*	*33*	*-8.7*	*41*	*3.8*
Not Well/Not at All	9	+13.22	16	179.25	13	- 9.4	16	10.6
Well/Very Well	17	+38.82	25	199.72	20	- 8.1	25	7.7
Bench Work	*31*	*+31.91*	*55*	*149.55*	*41*	*-20.3*	*58*	*3.0*
Not Well/Not at All	25	+25.24	43	144.12	34	-20.5	45	5.5
Well/Very Well	6	+59.17	12	169.00	7	-22.2	13	16.4
Structural	*29*	*+ 9.28*	*39*	*191.72*	*37*	*-15.9*	*38*	*10.8*
Not Well/Not at All	3	*	8	191.00	7	-31.5	8	7.6
Well/Very Well	26	+17.81	31	191.90	30	-12.3	30	11.7
Miscellaneous	*16*	*+26.00*	*24*	*178.00*	*20*	*- 9.9*	*24*	*13.9*
Not Well/Not at All	8	+59.75	10	171.50	10	- .8	10	1.2
Well/Very Well	8	+ 7.75	14	182.64	10	-19.0	14	23.0
All Occupations	*223*	*+23.36*	*365*	*162.11*	*297*	*-13.6*	*370*	*8.3*
Not Well/Not at All	80	+28.85	148	155.11	122	-17.1	153	6.2
Well/Very Well	143	+21.23	217	166.88	175	-11.2	217	9.8

*Data not shown for fewer than five persons. Farming occupations containing three persons are omitted.

Post-program average unemployment rates were somewhat lower for former trainees with low English proficiency levels than for those witt high proficiency levels. This overall difference was attributable mostly to the former trainees who worked in the clerical/sales, bench work and miscellaneous occupational groupings. In professional/technical, services and machine trades occupations, high English proficiency was associated with relatively low unemployment rates.

Although it might be hypothesized that English language proficiency would have considerable effects on trainees labor force outcomes and on current labor force status, such effects were generally very limited. The trainees' English language proficiency varied inversely with age, and younger trainees did not match the older ones in terms of earnings and ability to find jobs despite their superior command of English.

SUMMARY AND CONCLUSIONS

About one-third of the former trainees of bilingual vocational programs were working in an occupation matched closely with their training occupational area. Employment in training-related post-program jobs was most frequent among persons who received training in the health, consumer/homemaking and trade/industrial occupational catergories.

Trainees most often found training-related jobs if they attended a program in which there was joint program-employer planning of the training course. The total hours of vocational training received also were related directly to the frequency of post-program employment in a training related job.

The former trainees' reports of English needed for various purposes on their post-program jobs indicate that:

- about one-third of the trainees usually spoke a non-English language with their supervisors;
- oral English skills were needed much more frequently on the job than either reading or writing English skills, and more than two-fifths of the former trainees never needed to use English on the job for any of 6 specific types of communication out of 10 studied;
- persons who worked in professional/technical and clerical/sales occupations needed to use English most frequently, and those employed in services and bench work occupations needed English on the job the least; and
- the English needs of former trainees on their post-program jobs for specific purposes conformed generally to the emphasis placed on the various English skills by vocational and ESL instructors.

The highest English language proficiency levels of former trainees were found, on the average, in professional/technical, clerical/sales, machine trades, and structural occupations. The former trainees with the lowest English proficiency levels were most likely to be employed in services, processing and bench work occupations.

Post-program job earnings were higher for former trainees with high English proficiency, but post-program unemployment rates were lower for those with low English proficiency. English proficiency levels were not associated significantly with pre-post changes in earnings or unemployment.

The lack of association between English proficiency levels and post-program unemployment rates is probably attributable to the fact that the lower proficiency levels were found among the older trainees and their work experience enabled them to offset any English proficiency advantage younger workers may have had.

Former trainees with low English proficiency levels were able to find jobs in all occupational categories, but they predominated in only two--services and bench work occupations. Job earnings differentials between former trainees with high English proficiency and low

English proficiency were greatest in machine trades and bench work occupations: in each of these categories weekly job earnings for former trainees with high English proficiency were more than 10 percent higher than for those with low English proficiency.

In general, the findings indicate that persons with low levels of English language proficiency can do relatively well in certain occupations and their prospects usually are enhanced by increased English proficiency and job experience.

The bilingual vocational training effort to date has been too limited for the programs to have had an appreciable impact on skills shortages. To the extent that skills shortage occupations can be identified accurately, it appears that bilingual vocational training programs have offered training for several such occupations, including home health aide, health assistant, dental assistant, paralegal aide, air conditioning and refrigeration repair, professional chef, and clerical occupations. Training is offered by bilingual vocational programs for other high demand occupations in various local areas.

Bilingual vocational training programs have demonstrated that it is possible to train limited English-speaking adults for occupations with high demand for labor and potential skills shortages. A much expanded bilingual vocational training effort would be required, of course, for perceptible impacts to occur with respect to obviation of skills shortages.

IX. SYNTHESIS, EVALUATION AND RECOMMENDATIONS

INTRODUCTION

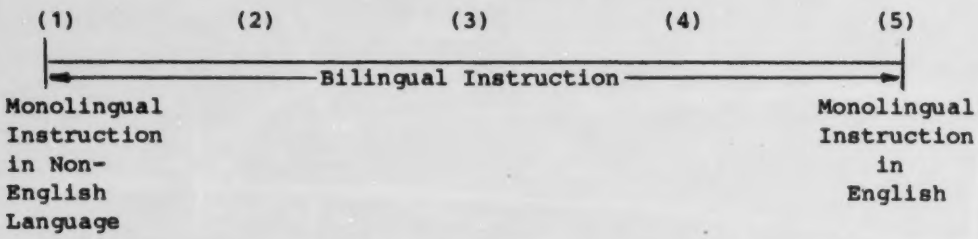
This evaluation is timely in view of ongoing formulation and reevaluation of policy regarding the role of vocational education, particularly with respect to serving disadvantaged persons. It is timely also from the standpoint of development of policy for serving the substantial numbers of limited English-speaking adults in the United States.

In helping to fulfill the mandate for program evaluation set forth by the Congress in the Subpart 3 legislation, this study is the first comprehensive examination of the characteristics of the clientele of bilingual vocational training and the operation and outcomes of programs providing such training. The evaluation results are germane to legislative and administrative policy making, and to program operation under Subpart 3, State vocational education set-asides for limited English-speaking persons, and other sources.

The discussions following focus on the need for and the role of bilingual vocational training in serving limited English-speaking adults, an analysis of the Subpart 3 legislation, an evaluation of how well bilingual vocational training has worked, an evaluation of the effects of the programs on the trainees, and legislative and programmatic recommendations.

EXISTING AND POTENTIAL ROLE OF BILINGUAL VOCATIONAL TRAINING

Bilingual vocational training is one method for providing occupational skills training to persons of limited English-speaking ability. The methods of vocational training delivery that are available for these persons can be portrayed on a continuum:



The extreme points of the continuum--(1) and (5)--are monolingual instruction in the trainees' native language and in English. Monolingual instruction in non-English languages is relatively rare in this country, while vocational instruction only in English is the most common approach. All points on the continuum between the two extremes--for example, (2), (3) or (4)--represent bilingual instruction with varying mixes of English and the non-English languages. Bilingual vocational training may be described by many points along the continuum; in fact, a general approach, which is espoused by the Subpart 3 program, is to move across all points (1) to (5) throughout the duration of the instruction as the trainees' English language proficiency increases.

The extreme right end of the continuum (5) represents the traditional and most common approach to providing vocational training; that is, instruction provided only in English. Since limited English-speaking persons, by definition, have trouble understanding vocational instruction provided only in English, this approach by itself is inappropriate for such persons. Therefore, the approach incorporates ESL instruction as a prerequisite or corequisite so that the trainees' English language proficiency is raised to a level that enables them to understand the vocational instruction in English. The traditional lack of bilingual vocational instructors and the widespread availability of ESL programs probably account largely for the popularity of this approach.

To the extent that the traditional approach relies on general purpose ESL instruction as preparatory training for vocational instruction

only in English, that approach delays the ability of limited English-speaking persons to learn job skills and to enter or re-enter the labor market. Bilingual vocational training is more suitable than the traditional approach for persons whose immediate interest or need is employment.

When bilingual vocational training is used for training persons for occupations that require very high levels of English proficiency it begins to lose its distinguishing characteristics in relation to the traditional approach. The extent of training needed in English language skills for those occupations (for example, bilingual secretary or medical technologist) reduce the potential advantages of the bilingual vocational training approach.

Bilingual vocational training thus is most suitable for persons who have very low English language proficiency and who want immediate employment. If their most immediate desire is to learn English as opposed to a job skill, bilingual vocational training would not be the most appropriate program. Bilingual vocational training also is most suitable for occupations in which the necessary English language skills can be acquired by the trainees.

Bilingual vocational training appears to be an appropriate means of providing job skills to various groups of limited English-speaking adults. Many of the existing programs have offered training primarily to recent immigrants to the U.S., including refugees from Vietnam and Russia (and in the past from Cuba). The findings of this study indicate that recent immigrants from various countries as well as Puerto Rican natives who have moved to the mainland, have benefited greatly from the program in terms of enhanced earnings and employment. Although the programs neither are nor should be restricted to immigrants to the U.S., it is nevertheless of significance for policy that the programs have served that group successfully and presumably could do so on a larger scale.

Limited English-speaking trainees who are not recent immigrants or who were born in the U.S. also have benefited from bilingual vocational training and they remain an important target group. Included among the persons in this group are Native Americans and older persons.

In total there are probably several million adults of limited English-speaking ability in the U.S. today. Some (perhaps substantial) proportion of these persons desire or could benefit from instruction in English language skills. Others desire or could benefit most from acquisition of job skills and subsequent employment, and some of those persons constitute the target group of bilingual vocational training.

Limited English-speaking adults constitute not only a large but a varied group. Other than their common bond of lack of proficiency in English, the limited English speaking are not monolithic; they have differing problems, desires and needs. One of their major needs, if not for economic reasons alone but also for reasons of self-esteem, is employment.

Educational institutions in the U.S. often have operated (and some still do) under the assumption that the most beneficial and urgent service for all limited English-speaking adults is training in English language skills. The reasoning continues to the effect that the limited English-speaking person will be able to participate more fully in the U.S. society only as (s)he gains knowledge of English. This reasoning, although correct generally in the long run, often is wrong in the short run because of its false premise.

Vocational training is one of the important services for limited English-speaking adults, and bilingual vocational training is an apparently efficient way to provide such training. Although it may not always be the most appropriate alternative, bilingual vocational training has considerable room for expansion as its potential advantages are more widely recognized.

EVALUATION OF LEGISLATION

In its "Statement of Findings" for both Part J and the subsequent Subpart 3 legislation, the Congress presented several findings regarding the problems of limited English-speaking persons and the availability of vocational training suitable for that population. The findings of this evaluation represent bilingual vocational training as it existed more than 3 years after the passage of the original Part J legislation. Therefore, it is useful to examine the original findings of the Congress in the light of updated information obtained from this evaluation following the initial bilingual vocational training efforts funded under Part J and Subpart 3.

The major findings outlined by the Congress and an assessment of each are as follows:

- Efforts of persons of limited English-speaking ability to profit from vocational education are severely restricted and the problem affects millions of U.S. citizens.

  This finding appears to be as true today as it was in 1974. Although reliable counts of the number of limited English-speaking adults are not available, they apparently number in the millions. Despite the magnitude of the problem, bilingual vocational training is not a widespread approach and has not expanded appreciably since the introduction of the Federal legislation.

- Limited English-speaking persons, because of lack of vocational training opportunities, are unable to help fill the critical need for trained personnel in vital occupational categories.

  This finding appears still to be true, and (as discussed in Chapter VIII) participation in bilingual vocational training sometimes enables limited English-speaking persons to obtain jobs in occupations that appear to have high demand for labor and possible skills shortages.

- Limited English-speaking persons suffer the hardships of unemployment or underemployment.

  Although statistics are not available for the entire limited English-speaking population, this finding is confirmed

by the status of those persons who have been enrolled in bilingual vocational training programs. Unemployment rates of persons in bilingual vocational programs were 3 to 4 times as high as the national average prior to entering training, and others were not counted as unemployed because they did not seek work. Of those who were employed prior to entering training, their weekly earnings were at a level of about 80 percent of the average nationally for nonsupervisory workers.

- A critical shortage exists of instructors possessing both the job knowledge and dual language capabilities required for adequate vocational instruction of limited English-speaking persons and to prepare those persons to perform adequately in a work environment requiring English language skills.

  Program operators generally reported that they had not experienced problems in finding skilled bilingual vocational instructors. However, some of the instructors had low levels of proficiency in the trainees' native languages. Expansion of bilingual vocational training in areas already served or into new areas probably would unearth more severe shortages of qualified instructors who are also bilingual.

- A shortage exists of instructional materials and of instructional methods and techniques suitable for bilingual vocational training.

  Apparent shortages of appropriate non-English and bilingual instructional materials were found in many training occupational areas, and instructors in bilingual vocational training programs often developed their own bilingual materials. No shortages were found of instructional methods in either vocational or related ESL classes. A wide variety of methods are used for instruction in vocational skills and in English language skills as well as for the integration and coordination of instruction in the two skills. Such variety appears often to be appropriate because of varying backgrounds of trainees, availability of materials, and other factors.

Two aspects of the legislation require further discussion in view of the experience of the bilingual vocational training effort to date. These two aspects are references in the legislation to (1) skills shortage occupations, and (2) work environments that require English language skills.

The references in Subpart 3 to training limited English-speaking adults for occupations that will help alleviate skills shortages represent a laudable policy position and a very worthwhile program purpose. Conversion of this statement of purpose to a program objective that is susceptible to measurement, however, is extremely difficult because of the rather primitive state of the art with respect to identifying existing shortages or projecting potential shortages. The number of persons trained for various occupations to date probably has been to small for a measurable impact to have occurred on alleviation of skills shortages. But, given the current state of the art, no assurance exists that such impact could be measured adequately.

Another factor for consideration with respect to skills shortage occupations is that shortages tend to persist in those occupations with the highest skill levels. Because high-skill occupations often require high English language proficiency, they sometimes may not be appropriate types of training occupational areas for the very limited English-speaking persons who are the clientele of the Subpart 3 programs.

With respect to the provision for preparing limited English-speaking adults for work in environments requiring English language skills, it should be recognized that persons enrolled in bilingual vocational training programs find jobs subsequently in workplaces with a wide variety of language environments. Many of those work environments are completely or predominantly English speaking, of course, but many others are bilingual or predominated by a non-English language. Although proficiency in English language skills contributes to the trainees' occupational and geographic mobility and to their chances for advancement, the reality is that English language demands in many jobs are minimal. Hence, the operators of bilingual vocational training programs, when designing their programs, often have considered the language needs of trainees in their probable workplaces as well as abstract English language requirements of the occupations.

With the reservations noted above, the findings of this evaluation indicate that the precepts and findings of the Congress as stated in the Part J and Subpart 3 legislation are generally valid today.

PROGRAM EVALUATION

The data, discussions and conclusions presented in the prior chapters provide a basis for evaluation of both the operation and the effects of bilingual vocational training programs.

Process Evaluation

The concerns of the process evaluation are whether the programs:

- enrolled the appropriate target group,
- provided effective instructional services,
- provided appropriate and adequate noninstructional and supportive services, and
- were planned and managed effectively.

Target Group Enrollment. As discussed in Chapter III, trainees in the bilingual vocational training programs generally meet the eligibility criteria as set forth in Subpart 3--adults who are limited English-speaking by virtue of a non-English language background and who are unemployed or underemployed. No uniform target group exists for the programs funded from sources other than Subpart 3, but those programs also served essentially the same target group as defined by the Subpart 3 legislation.

Two possible shortcomings were found regarding the recruitment of persons into bilingual vocational training programs, although the incidence of each was minor. First, the native language is English for nearly 5 percent of the trainees. Second, about 4 percent of the trainees to be interviewed in the follow-up survey were traced to foreign countries (including Puerto Rico). Bilingual vocational training programs are not designed for either native English speakers or persons who work in foreign

countries. It is important that the recruitment efforts of bilingual vocational training programs be focused on the appropriate target group because of the limited available resources.

Instructional Services. The vocational and ESL components appeared to complement each other well in the bilingual vocational training programs. The two types of instructors placed different amounts of emphasis on various types of job-related English language skills, and in different instances each type of instructor came closest to the degree to which the trainees needed the English skills on their post-program job. Because one type of instructor often comes closer than the other to assessing trainees' on-the-job language needs, the importance is underscored of coordination of the two types of instruction.

Vocational instructors in bilingual vocational training programs were not always proficient in the trainees' native languages, and not all of them had prior experience working with limited English-speaking persons. Not all vocational instructors were expert in instructional techniques, and they recognized that fact. The vocational instructors were, however, experienced in their trades and had backgrounds appropriate for instructing in the various occupational areas. The vocational instructors were the nerve center of many programs, not only for job skills instruction but for job placement, trainee counseling, materials development, and other functions.

Non-Instructional and Supportive Services. The provision of supportive services by the programs varied widely, depending upon trainees' needs and available resources. Although some program directors cited the need for additional resources, particularly for personal counseling and trainee stipends, the availability of most services generally appeared adequate.

Program Planning and Management. Generally, program administrators appeared to plan (or attempted to plan) occupational offerings in relation

to local labor market demand factors. Involvement of employers and other community resources, especially in curricula planning and in job development/placement activities, was pursued frequently and often effectively. Feedback from both former trainees and their employers was reported to be a frequent program management technique, often resulting in changes in program operation.

An important aspect of program management that appears to be of varying effectiveness and that requires continuing attention is the coordination of the vocational training and ESL components of the programs. Although such coordination is practiced in effective and innovative ways in several programs, in other programs vocational and ESL instructors work too independently for the instruction in English language skills to be integrated adequately with the occupational skills instruction. This problem indicates a need for the development of mechanisms and procedures for effective coordination as well as for continuing instructor education.

Evaluation of Program Effects

The concerns of the evaluation of the effects of bilingual vocational training programs are drawn from the stated and implied goals of increasing trainees' (1) employment status by providing them with marketable job skills, and (2) English language proficiency.

Effects on Trainees' Labor Force Status. In the months following their training, the former trainees spent about 25 percent more of their time in the labor force (that is, working or seeking work) than during the year prior to entering the program. The average unemployment rate for those persons in the labor force during both the pre- and post-program periods declined by more than 40 percent. Weekly job earnings of trainees who were employed both prior to and after the training increased by more than 16 percent.

The decline of trainee pre-post unemployment rates was nearly twice as great as the decline in the aggregate U.S. unemployment rate and

nearly 5 times as great as the decline in the average unemployment rate for the labor areas in which the trainees lived. This magnitude of change makes it extremely likely that participation in bilingual vocational training influenced trainee employment very favorably.

The improvement in trainees' pre-post earnings was closely comparable to the rate of increase for all nonsupervisory and production workers nationally. Considering their initial disadvantages in competing in the labor market, the improvement in earnings appears likely to have been influenced strongly by participation in the program, although this conclusion is less clearcut than that with respect to the change in unemployment rates.

Improvements in both trainee unemployment rates and job earnings were more favorable in the programs funded under Subpart 3 than for programs funded under other sources. These comparatively more favorable outcomes resulted both from (1) enrollment of trainees who benefit most from the training (those with high unemployment and low earnings), and (2) program operating features, particularly the use of employers and labor market/occupational data in program planning, and coordination of vocational and ESL instruction.

Some trainees who were not working after leaving the program were obtaining additional job training or were enrolled in educational institutions to further their education.

Bilingual vocational training efforts to date have been far too limited for the program to have had an impact on skills shortages, although in many programs efforts have been devoted to training persons for occupations with high demand for labor.

Effects on Trainees' English Language Proficiency. Impacts of bilingual vocational training programs on trainees' English language proficiency could not be determined as part of this evaluation. Although pre-post program measures of English proficiency are not available,

measures were taken (1) while the trainees were enrolled in the programs and (2) several months later after they had left training. On average, the trainees' English language proficiency increased between those two points in time suggesting strongly, but in no way verifying, that pre-post gains in English language proficiency levels probably did occur and that these levels were maintained over a period of several months.

Overall Evaluation

Bilingual vocational training, as practiced in programs funded under both Subpart 3 and other sources, is an effective approach to providing occupational skills training to limited English-speaking adults. Compared to other types of vocational education, there has been less experience with bilingual vocational training, yet the programs generally have operated effectively in terms of both (1) activities that are responsive to trainees' needs and relevant to labor market realities, and (2) employment and earnings outcomes of trainees.

CONTRACTOR'S RECOMMENDATIONS

Recommendations regarding both the legislation and administration of bilingual vocational training are proffered for consideration by policy makers. The recommendations are derived from the findings, analyses and conclusions of this evaluation.

Legislative

The legislative recommendations and a brief statement of the rationale for each are as follows:

- Bilingual vocational training for adults with limited English-speaking ability should be continued as a national program.

  Bilingual vocational training is one effective approach for attaining the goal of improving the job

skills and employability of limited English-speaking adults. So long as this remains a national goal, State and local efforts should be supplemented by a national program to insure adequate response to the training needs of the target group.

- Funding should be increased for bilingual vocational training for limited English-speaking adults.

  Appropriations for the Part J/Subpart 3 program to date have been very limited (about $2.8 million per annum). Resources for the program should be increased substantially from the present low levels in view of (1) the magnitude of the problem being addressed by the program, (2) the favorable results of the program to date, and (3) the capability of the program to prepare trainees for the job market without lengthy training in English language skills. Concomitant increases should be made in funding for instructor training and development of bilingual materials.

- Future legislation concerned with training of limited English-speaking adults should contain provisions for bilingual vocational training.

  The types of relevant legislation include not only vocational education, but laws, for example, related to employment and trianing or services for refugee groups. With respect to the latter problem, bilingual vocational training offers a particularly suitable approach for speeding the integration of immigrants into American society and their productive involvement in the labor force.

Administrative

The following recommendations for the administration of bilingual vocational training programs for adults apply, for the most part, to all such programs. The recommendations that are directed specifically to the Subpart 3 programs are so noted, but they may have relevance for other programs as well.

The recommendations and the rationale for each are as follows:

- Trainee recruitment efforts should focus on enrolling persons with high unemployment and low previous earnings when other criteria are met.

  This evaluation demonstrates that the highest payoff is obtained with this recruiting focus. That is, those trainees benefit most, economically, and, presumably, society's cost for transfer payments (such as unemployment compensation) would be reduced.

- Recruitment efforts should focus on persons with a non-English mother tongue who intend to enter the labor force and who intend to remain in the United States.

  Although the numbers were relatively small, some trainees did not meet these criteria for program enrollment.

- Priority should be given to the development of vocational instructional materials for selected occupations.

  Shortages of adequate non-English and bilingual instructional materials are well-recognized. Two possible approaches to alleviating these shortages are to (1) identify a few key occupations which are appropriate for bilingual vocational training and develop or adapt suitable materials for those areas, and (2) develop a clearinghouse mechanism for the interchange of self-developed bilingual materials among vocational instructors. The second approach could be expanded to commissioning vocational instructors for the development of new materials.

- Research is needed to determine English language skills required or used in selected occupations.

  These occupations should be selected from among those with strong growth possibilities over the next several years. A finding of this evaluation of potential importance was that the average level of English language proficiency of former trainees employed in machine trades and structural occupations was only slightly below the level of persons employed in professional/technical and clerical/sales occupations. Although this may not be a result of English requirements in the occupations, that possibility should be explored to determine more precisely

the English needs in such occupations as machinist, mechanics, air conditioning and heating repair, and welder. Intensive study of the actual tasks on the job is required to determine language needs adequately.

- Instructor training should focus on development of a cadre of instructional aides as well as vocational instructors.

  Capable bilingual instructional aides can help alleviate the shortages of qualified bilingual vocational instructors and can permit the development of bilingual vocational training programs even when the instructor is not bilingual. As this evaluation shows, aides who can translate to the trainees' native languages can be an important factor in classroom communication, particularly when there is more than one non-English language group among the trainees.

- Continuing effort should be placed on development of effective mechanisms and procedures for coordinating vocational and ESL instruction.

  In the Subpart 3 programs, additional training of vocational instructors as well as program directors and ESL instructors may be helpful. Coordination also could be facilitated through the use of instructional aides.

- Bilingual ESL instruction should be studied as an approach for very limited English-speaking persons.

  A relatively few very limited English-speaking trainees still had very low English language proficiency after leaving the program. Such persons and other limited English-speaking trainees may benefit from a bilingual approach to ESL. Bilingual ESL was provided by some of the programs studied. Bilingual ESL could be investigated for its applicability on a wider scale.

- Training should be encouraged for social service and related paraprofessional occupations for serving language minorities.

  There is a relatively limited amount of training in bilingual vocational training programs for social service occupations. Some limited English-speaking persons appear to be particularly suited to such occupations which directly serve language minority

and other limited English-speaking persons. Thus, the work draws upon knowledge of both English and the non-English language, but very high levels of English proficiency are not required to work with a limited English-speaking clientele.

Implementation of the above recommendations, it is believed, will contribute to meeting the training needs of limited English-speaking adults. These recommendations are offered for the purpose of improving already effective programs.

APPENDIX A

NUMBERS OF LANGUAGE MINORITY PERSONS IN SELECTED STATES

Table A-1
States With High Proportions
of Language Minority Persons,
Spring 1976

State	Percent
New Mexico	44
Hawaii	35
California	25
New York	25
Texas	25
Arizona	23
Rhode Island	21
Connecticut	19
New Jersey	19
Louisiana	17
Massachusetts	17
North Dakota	16
New Hampshire	15
Florida	14
Alaska	14
Colorado	14
Average, All States	13

Table A-2
States With Large Population of
Language Minority Persons, Spring 1976

State	Number (in thousands)	Percent of Total
All States	27,985	100.0
California	5,221	18.7
New York	4,433	15.8
Texas	3,041	10.9
Illinois	1,473	5.3
New Jersey	1,375	4.9
Pennsylvania	1,292	4.6
Florida	1,177	4.2
Massachusetts	952	3.4
Michigan	852	3.0
Ohio	817	2.9
Louisiana	624	2.2
Connecticut	587	2.1
Arizona	533	1.9
New Mexico	507	1.8
All Other States	5,101	18.3

NOTE: Persons 14 years of age and older are considered a language minority if their mother tongue is not English; persons under 14 are considered a language minority if a non-English language is spoken often in the household.

Source: National Center for Education Statistics, "Geographic Distribution, Nativity, and Age Distribution of Language Minorities in the United States: Spring 1976," NCES Bulletin 78-134, August 22, 1978.

APPENDIX B

METHODOLOGY AND PROCEDURES

METHODOLOGY AND PROCEDURES

STUDY DESIGN

As discussed in the text, the study has a longitudinal before-and-after design with respect to trainee labor force status. That is, pre- and post-program measurements were made of the following labor force variables: labor force participation, unemployment, job earnings, number of hours worked on jobs, industry of employment, and occupation. Detailed information was being collected on these variables for each trainee for (1) the 12-month period prior to entry into the sample bilingual vocational training classes, and (2) the period subsequent to leaving the training class and ending on the date of the second interview. The length of the post-program period is variable, depending on when the trainee left the class. The second interviews were conducted approximately 9 to 13 months after the initial interviews, and the post-program period available for study is in the range of 6 to 9 months for most trainees. The interval between the first and second interviews with the sample trainees was predetermined; therefore, it was not possible to obtain post-program data for comparable lengths of time for all trainees.

Labor force variables are expressed in both longitudinal and cross-sectional terms. In longitudinal terms, the labor force participation rate and the unemployment rate for each individual trainee were calculated as percentages over the entire pre- and post-training periods. For example, if a trainee was in the labor force 9 of the 12 months preceding training entry, the longitudinal (or average) labor force participation rate for that trainee would be 75 percent. The mean of these rates for the entire sample or any subgroup is referred to as the average labor force participation rate. Similar calculations were made to determine longitudinal and average unemployment rates.

Cross-sectional labor force participation and unemployment rates, expressed as percentages of the total sample (and subgroups of the sample), were calculated for the period immediately prior to program entry and at time of the second wave interview.

Measurements of English language proficiency were obtained at the time of both interviews with trainees. The first and second measurements of English language proficiency have different purposes. The first, obtained while trainees still were enrolled in bilingual vocational training, is used to classify the trainees according to their English proficiency at that time. The second measure, obtained after leaving training, is used to analyze the relationships between English language proficiency and labor force status. Since it was not possible to obtain pre-training measures of English language proficiency, before-and-after measures were not possible. Therefore, the impacts of bilingual vocational training on the English language proficiency of trainees could not be determined.

SAMPLE DESIGN

Bilingual vocational training occurs at various places throughout the nation and at various times throughout the year. Many programs and classes operate continuously year-round; others operate intermittently throughout the year; and others are open during only certain parts of the year. Since the classes are for adults, most are open during all parts of the year.

The aim of the sampling plan was to represent both (1) the geographic dispersion of bilingual vocational training classes and enrollees, and (2) the total enrollment of limited English-speaking trainees over the course of an entire year. Since the initial field data collection was restricted, by cost considerations, to a period of approximately two months, it was necessary to plan the sampling so that trainees enrolled during that period represented annual enrollment.

During the compilation of the inventory of bilingual vocational training programs in late 1977, information was obtained to identify the sampling universe of classes and the number of trainees in each class. As discussed in the text, some classes included in the overall inventory were excluded from the sampling universe for certain reasons. For each class that qualified for the sampling universe, information was obtained on the number of limited English-speaking trainees enrolled annually and the average number of such trainees enrolled at any given time during periods when the class was operating. These numbers were estimated by program administrative and instructional staffs at the time of the inventory and again immediately prior to the field work in the spring of 1978.

The sampling approach involved calculation for each vocational class of the ratio of current enrollment of limited English-speaking trainees to the total enrollment of such trainees annually. Obviously, if a class operated only once a year with a fixed group of trainees, this ratio would be unity; that is, current enrollment would be annual enrollment. If, however, a class had five cycles or sessions per year with equal numbers of trainees in each cycle, the ratio of current enrollment to annual enrollment would be .20. Five times as many trainees would have to be sampled from this latter class as from the first example class given above to represent annual enrollment of the two classes combined.

The above approach was applied by dividing the sample universe of classes into four strata. The strata represent quartiles of the ratio of current to annual enrollment. Table B-1 on the following page shows the distribution of the classes and limited English-speaking enrollees according to these strata.

DATA COLLECTION PROCEDURES

All data collection was conducted by field staff who are bilingual in English and Spanish and in English and Chinese. All field staff

TABLE B-1

Sample Size, Sampling Ratios and Sample Distribution
By Stratum and Class

Strata (Ratio of Current to Annual Enrollment, Limited English-Speaking Trainees):	(1) Current Limited English-Speaking Enrollment	(2) Annual Limited English-Speaking Enrollment	(3) Percent of Annual Enrollment By Stratum	(4) Target Sample Size	(5) Target Sampling Ratio (4)÷(1)
75 – 100%	330	362	6.8%	68	.206
50 – 74%	155	235	4.4%	44	.284
25 – 49%	1160	3400	64.2%	642	.553
< 25%	206	1302	24.6%	206	1.000
Totals:	1851	5299	100.0%	960	.540

Strata	(6) Actual Sampling Ratio	(7) Actual Sample Size	(8) Actual Percentage Distribution of Sample by Stratum	(9) Number of Classes	(10) Mean Number of Sample Trainees Per Class
75 – 100%	.206 = 1/5	61	8.5%	9	6.8
50 – 74%	.284 = 1/4	41	5.7%	10	4.1
25 – 49%	.553 = 1/2	419	58.4%	48	8.7
< 25%	1.000 = 1	197	27.4%	20	9.9
Totals:		718	100.0%	87	8.3

NOTE: Current and annual enrollment of limited English-speaking trainees in bilingual vocational training programs was based on information obtained immediately prior to beginning field work in the Spring of 1978. At that time the indicated numbers of persons were enrolled in 102 operating classes. At the time the field work started two weeks later, because of the passage of Proposition 13 in California and other closings, only 87 classes were open. As shown in Column (8), the percentage distribution of sample trainees among the strata did not change greatly although the sample size decreased.

attended an intensive 4-day training session conducted by the contractor's and subcontractor's project staff and consultants. The training included a review of study purposes, description of program operations and organization, familiarization and practice with interview schedules, practice in administering and scoring the Ilyin Oral Interview, instruction in trainee sampling procedures, field protocol, and procedures for locating trainees for the follow-up survey. Each member of the field staff was provided with a detailed field manual for reference throughout the study.

Field staff began work at each sample program with an interview and initial discussions with the Program Director. At that time, or in subsequent discussions with vocational instructors in the sample bilingual vocational classes, a determination was made regarding whether to include a case study of ESL instruction and its coordination with vocational instruction. This determination was positive if it appeared that ESL and vocational instruction were coordinated.

Very early in the field work at each program, the field staff gathered from the instructors for each of the sample vocational classes, a roster of all trainees currently enrolled. For each trainee in each sample class, the instructor was asked if that person has "difficulty speaking and/or understanding instruction in the English language." If the instructor replied positively, that person was considered limited English-speaking and was left on the class roster for sampling purposes. All other trainees (that is, those who were not limited English-speaking) were removed from the list.

The names of trainees remaining on the list were arranged in alphabetical order. The central staff provided the field worker with a random number and, in accordance with the sampling ratio for the class, selected the sample of trainees by the skip interval method. When substitutions were necessary (for example, a trainee had moved or was ill), the next name on the list was chosen.

First-wave interviews with trainees generally were conducted at available space provided by the programs or at nearby locations. Follow-up interviews generally were conducted at trainees' homes. All interviews were conducted in privacy, on a one-to-one basis, except when translation was needed to a language other than Chinese or Spanish.

DATA COLLECTION INSTRUMENTS

Data were gathered during the initial wave of field work with five instruments:

- Interview Schedule for Program Directors
- Interview Schedule for Vocational Instructors

- Interview Schedule for ESL Instructors
- Interview Schedule for Trainees (Part I)
- Ilyin Oral Interview (for trainees)

The follow-up survey instruments were the Interview Schedule for Trainees (Part II) and the Ilyin Oral Interview. Both trainee interview schedules were printed in three versions: English, Spanish and Chinese.

The Interview Schedule for Program Directors contained questions regarding the extent of the institution's vocational programs for limited English-speaking adults, including the sample classes; goals of the bilingual vocational training programs; availability of ESL training; coordination of ESL and vocational training; program planning; relationships with other organizations and employers; and staff training.

The Interview Schedule for Vocational Instructors included questions on the number of limited English-speaking trainees in the sample classes; the duration and intensity of classroom training; occupational skills taught; English language skills taught; proficiency in trainees' native languages; coordination of English instruction with ESL instructors; occupational background and credentials; and training for teaching limited English-speaking adults.

The Interview Schedule for ESL Instructors included questions regarding enrollment in ESL classes of vocational and non-vocational students; types of English skills taught; methods of instruction; coordination of English with occupational skills instruction; educational background and special training for teaching limited English-speaking adults.

Trainees were asked questions during the first wave about their educational attainment both in the United States and foreign countries; years of residence in the United States; amount of English study; prior vocational training; usual occupation; prior work history and unemployment; career and educational aspirations; self-reports of understanding, speaking and reading English; extent of instructors' use of English in the vocational classroom; understanding of vocational instructors' English; understanding of vocational and ESL materials; demographic characteristics; and information for locating the respondent during the follow-up survey.

The follow-up Interview Schedule for Trainees included a detailed post-training history of employment and unemployment; subsequent schooling and training; self-reports of English understanding, speaking and reading; satisfaction with vocational instruction and training; and satisfaction with post-training jobs.

The initial trainee interview schedule contained a detailed activity calendar which traced, in reverse chronological order, the trainees' main activities and their inclusive dates during the year prior to training

entry. Main activities were defined as working, attending school, attending training, and "other." The "other" category (except in cases of institutionalization) was divided further into periods of looking for work and not looking for work. Periods spent looking for work were counted as time in the labor force and unemployed, while employed periods, of course, were counted as in the labor force and employed. All other periods were counted as out of the labor force. For each working period, an activity record obtained the trainee's occupation as well as the industry of employment, weekly hours worked, and beginning and ending (or current) earnings.

The follow-up interviews for trainees contained a similar activity calendar, but the activity record for employed periods was expanded to include questions on how each job was obtained, job satisfaction, and the trainee's evaluation of vocational training received relative to the job. Information obtained for unemployed periods included methods of searching for jobs or, alternatively, reasons for not seeking work.

The Ilyin Oral Interview was administered (in English) to each trainee in both waves of the survey prior to proceeding to the interview schedule. The questions in the interview schedule were asked either in English or in the trainee's native language.

FOLLOW-UP SURVEY AND RESPONSE RATES

The second wave of interviews or the follow-up survey was started during the Spring of 1979. Between the time of the first-wave of field work in the Spring and Summer of 1978 and the follow-up survey, all trainees who were interviewed during the first wave were contacted by mail. The purposes of the mail contact were to determine whether there had been changes of address for the trainees, to alert them again to the follow-up survey, and to solicit their cooperation in the follow-up survey. For cases in which the postal service was unable to deliver the mail, telephone or mail contacts were made with one or both of the contact persons whose names, addresses and telephone numbers had been supplied by the trainees in the first-wave interview. In some cases, program staff and instructors were contacted to attempt to track trainees who could not be reached.

The number of first-wave respondents re-interviewed during the follow-up survey was 518 or 72.1 percent of the total. As shown in Table B-2, 43 persons had moved to a foreign country, had supplied false locating information, were institutionalized, or were too ill to be interviewed. If these 43 persons are subtracted from the base of 718, the response rate was 76.7 percent (shown as the "net" response rate in Table B-2).

Table B-2 summarizes the disposition of the 718 cases during the second wave. Two categories of completed interviews are presented: (1) persons interviewed in the same area as the first-wave interview, and

Table B-2
Response Rate and Disposition of Cases,
Follow-Up Survey

Disposition	Number	Percent of Total
I. Total Interview Attempts	*718*	*100.0*
II. Interviewed	*518*	*72.1*
a. In same area	(511)	(71.2)
b. Tracked and interviewed in different area	(7)	(0.9)
III. Not Interviewed	*200*	*27.9*
a. Unable to locate	(77)	(10.7)
b. Moved, unable to track	(7)	(0.9)
c. Moved, tracked to different area within U.S., but unable to locate	(16)	(2.2)
d. Moved, tracked to foreign country, not to be interviewed	(30)	(4.2)
e. Located, unable to interview	(14)	(2.0)
f. Unable to locate, respondent supplied false information on address or contacts	(6)	(0.9)
g. Institutionalized	(3)	(0.4)
h. Too ill to be interviewed	(4)	(0.6)
i. Refused	(43)	(6.0)

"Gross" Response Rate: II ÷ I = 72.1

"Net" Response Rate: II ÷ I - (III d + III f + III g + III h) = 76.7

(2) persons tracked and then interviewed in a different area. As shown in Table B-2, 23 respondents were tracked to a different area, and inter-views were completed with 7 of them.

Nearly 14 percent of the follow-up sample (100 persons) could not be located. When the sample persons could be located, an interview usually was completed. Only 14 persons (2 percent of the total) were located but could not be found at home or could not schedule an interview. Six percent of the persons in the sample (43 persons) refused to participate in the follow-up survey. The refusal rate was influenced strongly by a relatively large number of refusals in one area where another survey had been conducted shortly before the follow-up survey for this study. Second-wave response rates for individual programs ranged from 50 percent to 100 percent.

COMPARISON OF FIRST-WAVE AND FOLLOW-UP RESPONDENTS

No systematic biases exist between the first- and second-wave respondents. As shown in Table B-3, the differences between the principal characteristics of the two groups are minor. In general, the findings of the follow-up survey appear to represent reliably the entire trainee sample.

An isolated bias between the two samples that is potentially significant relates to the representativeness of the Cuban-born trainees included in the second-wave sample. The Cuban-born trainees interviewed in Wave II had an average pre-program unemployment rate of 8.8 percent, while the corresponding rate for all Cuban-born trainees in the original Wave I sample was 16.0 percent. Because there was an inverse relationship between pre-program average unemployment rates and pre-post change in average unemployment arates, the survey results for the Cuban-born trainees may be biased toward an increase in the change of the average unemployment rate for that group. Since Cuban-born trainees represent a large proportion of the trainees in the non-Subpart 3 sample, the favorable change in the pre-post average unemployment rate for non-Subpart 3 trainees may be understated somewhat. If such a bias exists, it would not change the general findings or conclusions of the study.

No other significant biases were detected that would appear to affect the findings of the Wave II survey or changes between the pre-program and post-program periods.

Table B-3

Comparison of Selected Demographic, Socioeconomic and Language Characteristics of Wave I and Wave II (Follow-Up) Trainee Sample (in percents)

Characteristic	Wave I Respondents (n=718)	Wave II Respondents (n=518)
Program Type		
Subpart J	23.3	23.0
Non-Subpart J	76.7	77.0
Sex		
Male	39.8	39.2
Female	60.2	60.8
Age[1]		
Under 25	32.1	31.2
25-34	30.3	28.4
35 & Over	37.6	40.4
Marital Status[1]		
Married	50.2	51.5
Not Married	49.8	48.5
Mother Tongue		
English	4.5	4.3
All Non-English Languages:	95.5	95.7
Spanish	(74.1)	(74.3)
Chinese	(11.7)	(11.6)
Other	(9.7)	(9.8)
Country of Birth[2]		
United States	18.0	19.3
All Foreign Countries:	82.0	80.7
All Spanish-Speaking:	(65.4)	(64.8)
Mexico	(12.3)	(12.3)
Cuba	(31.3)	(33.4)
Puerto Rico	(6.5)	(5.2)
Central America	(6.1)	(5.2)
Other Spanish	(9.2)	(8.7)
China-Hong Kong	(11.1)	(11.2)
Other Asian	(4.5)	(3.5)
Other	(1.0)	(1.2)
Years of Education (Total)[1]		
0-6	16.2	15.6
7-9	20.3	20.3
10-11	19.8	18.7
12 & Over	43.7	45.4
Years of Education in U.S[1]		
0	57.4	56.6
1-2	12.0	11.4
3-4	4.6	5.4
5-6	3.8	2.9
7-9	6.3	6.6
10-11	6.8	7.1
12 & Over	9.1	10.0
MELP Speaking Rating (Wave I)		
Not At All	7.4	7.0
Not Well:	52.1	51.5
Just a Few Words	(20.4)	(20.3)
More than a Few Words	(31.7)	(31.2)
Well	27.9	28.9
Very Well	12.6	12.6
Ilyin Oral Interview Score[1]		
Failed Screen	17.2	16.1
Failed Orientation	4.7	4.6
0-24	16.0	16.1
25-39	9.6	10.3
40-59	17.6	16.2
60-74	15.2	16.8
75-100	19.7	19.9
Proportion of Time Employed (Year Prior to Training)[1]		
0%	39.3	38.2
1-50%	12.0	12.4
51-99%	15.0	14.5
100%	33.7	34.9
Ending Weekly Pay of Most Recent Job Prior to Training[1]		
Under $110	33.7	29.7
$110-159	37.4	40.6
$160 & Over	28.9	29.7

[1] Pre-program status.

[2] Trainees born in Puerto Rico are counted as foreign born because Spanish is the usual language. Trainees did not always differentiate People's Republic of China (mainland China) from Republic of China (Taiwan).

APPENDIX C

SELECTED STATISTICS ON PERSONS OF NON-ENGLISH LANGUAGE BACKGROUND IN THE UNITED STATES

Table C-1

Proportions of Persons 19 Years of Age and Older of Non-English Language Background in the United States Who Are Foreign Born, by Language Group, Spring 1976

Language Group	Percent Foreign Born
All Non-English Languages	39.9
Selected European Languages	37.8
Spanish	38.0
Other European (French, German, Greek, Italian, Polish, Portuguese, Russian, Scandinavian languages, Yiddish)	36.0
Selected Asian Languages	72.8
Chinese	79.6
Navajo	2.4
Other Languages	45.8

NOTE: Puerto Rico counted as U.S. born.

Source: Dorothy Waggoner, "Non-English Language Background Persons: Three U.S. Surveys," TESOL Quarterly, XII (September 1978), 247-262.

Table C-2

Distribution of Persons of Hispanic Origin in the United States, by Subgroup, Spring 1976

Group	Number (in thousands)	Percent of Total
All Hispanic Origin	11,193	100.0
Mexican	6,797	60.7
Puerto Rican	1,593	14.2
Mixed and Other	1,272	11.4
Central American or South American	809	7.2
Cuban	714	6.5

Table C-3

Proportions of Persons of Hispanic Origin in the United States Who Are Foreign Born, by Subgroup, Spring 1976

Group	Percent Foreign Born
All Hispanic Origin	37.7[1]
Mexican	20.7
Puerto Rican	51.9[1]
Central American or South American	69.0
Cuban	82.1
Mixed and Other	66.5

[1]Puerto Ricans counted as foreign born if born in Puerto Rico. If all Puerto Ricans are counted as U.S. born, the percentage foreign born for all Hispanic origins would be 30.4 rather than 37.7.

Source: National Center for Education Statistics, "Place of Birth and Language Characteristics of Persons of Hispanic Origin in the United States, Spring 1976," NCES Bulletin 78-135, October 20, 1978.

APPENDIX D

SELECTED DEMOGRAPHIC, EDUCATIONAL, LANGUAGE AND LABOR FORCE CHARACTERISTICS OF TRAINEES

SELECTED DEMOGRAPHIC, EDUCATIONAL, LANGUAGE AND LABOR FORCE CHARACTERISTICS OF TRAINEES

The tables in this appendix contain detailed data on the characteristics of trainees while they were enrolled in bilingual vocational training or prior to entering training. The tables are grouped by major characteristics as follows:

- Demographic Characteristics (Tables D-1 through D-4). Included are data on sex, age, marital status, head of household status, country of birth, and years of residence in the U.S. for foreign-born trainees. As noted in the text, persons born in Puerto Rico are counted as foreign-born because Spanish is the usual language of Puerto Rico. The country of birth category "China-Hong Kong" includes persons born in Hong Kong, the People's Republic of China (mainland China), or the Republic of China (Taiwan). Trainees who reported that they were born in China did not always (nor were they asked to) distinguish between mainland China and Taiwan.[1]

- Educational Characteristics (Tables D-5 through D-8). These tables include information on years of school completed for three types of education: (1) total years completed; (2) total years completed in the U.S.; and (3) total years of English education; that is, years of education in which the instructional medium was English, regardless of the country.

- Language Characteristics (Tables D-9 through D-53). Included are data on English language proficiency and languages usually spoken. The English language proficiency measures are the self-ratings (MELP understanding, MELP speaking, MELP reading) and scores on the Ilyin Oral Interview (a structured test measuring understanding and speaking). In addition to the discussion in Chapter III, detailed explanations of the English language proficiency measures are provided in Appendix E.

- Labor Force Status and Experience (Tables D-54 through D-56). These tables include information on trainees' usual occupations, average labor force participation rates, unemployment rates, percent of time employed, and highest weekly job earnings.

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[1] All tables showing country of birth, not only those in the demographic characteristics section, classify Puerto Ricans and Chinese persons as described here.

Table D-1
Percentage Distribution of Trainees by Sex and Age, by Country of Birth

Sex And Age Groups	Country of Birth											
				Spanish-Speaking Countries								
	U.S. (n=129)	All Foreign Countries (n=588)	All Spanish-Speaking Countries (n=470)	Mexico (n=88)	Cuba (n=225)	Puerto Rico (n=47)	Central America (n=44)	Other Spanish (n=66)	China-Hong Kong (n=80)	Other Asian (n=32)	Other (n=6)	Total All Countries (n=717)
Male:												
Under 24	26.3	9.5	9.4	18.2	3.1	31.9	4.5	6.1	6.3	15.6	33.3	12.6
25-34	15.5	13.3	10.0	14.8	3.1	19.1	9.1	21.2	31.3	18.8	0.0	13.7
35 or over	10.1	14.3	13.2	9.0	19.6	4.3	2.3	10.6	23.7	9.4	0.0	13.5
All age groups	51.9	37.1	32.6	42.0	25.8	55.3	15.9	37.9	61.3	43.8	33.3	39.8
Female:												
Under 24	31.0	17.0	18.9	25.0	12.4	21.3	34.1	21.2	7.5	15.6	0.0	19.5
25-34	12.4	17.5	17.0	14.8	16.0	12.8	25.0	21.2	15.0	25.0	50.0	16.6
35 or over	4.7	28.4	31.5	18.2	45.8	10.6	25.0	19.7	16.2	15.6	16.7	24.1
All age groups	48.1	62.9	67.4	58.0	74.2	44.7	84.1	62.1	38.7	56.2	66.7	60.2
Both Sexes:												
Under 24	57.4	26.5	28.3	43.2	15.6	53.2	38.6	27.3	13.7	31.2	33.3	32.1
25-34	27.9	30.8	27.0	29.5	19.1	31.9	34.1	42.4	46.3	43.8	50.0	30.3
35 or over	14.7	42.7	44.7	27.3	65.3	14.9	27.3	30.3	40.0	25.0	16.7	37.6
All age groups	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-2
Percentage Distribution of Foreign-Born Trainees' Countries of Birth by Number of Years Lived in the U.S.

Country of Birth	Years in U.S.			
	0-5 Years (n=270)	6-15 Years (n=226)	16 or More Years (n=88)	Total Years (n=584)
All Spanish-Speaking Countries:	*60.1*	*95.6*	*98.9*	*79.6*
Mexico	15.6	14.6	14.8	15.1
Cuba	13.3	56.3	70.5	38.5
Puerto Rico	7.8	6.6	6.8	7.2
Central America	10.4	6.6	1.1	7.5
Other Spanish	13.0	11.5	5.7	11.3
All Asian Countries:	*37.4*	*4.4*	*1.1*	*19.2*
China - Hong Kong	25.9	4.0	1.1	13.7
Other Asian	11.5	0.4	0.0	5.5
Other	*2.5*	*-0-*	*-0-*	*1.2*
Total	*100.0*	*100.0*	*100.0*	*100.0*

Table D-3
Marital Status and Household Head Status of Trainees in Bilingual Vocational Training Programs by Sex, Spring - Summer 1978

Marital Status, Household Head Status	Sex		
	Male (n=286)	Female (n=432)	Both Sexes (n=718)
MARITAL STATUS			
Married	53.3	48.1	50.2
Not Married	46.7	51.9	49.8
Total	100.0	100.0	100.0
HOUSEHOLD HEAD STATUS			
Head of Household	63.6	30.8	43.9
Not Head of Household	36.4	69.2	56.1
Total	100.0	100.0	100.0

Table D-4
Sex, Age, and Marital Status of Trainees in Bilingual Vocational Training Programs, Spring - Summer 1978

Sex, Age, Marital Status	Program Type		
	Subpart 3 (n=167)	Non-Subpart 3 (n=551)	All Programs (n=718)
SEX			
Male	41.3	39.4	39.8
Female	58.7	60.6	60.2
Both Sexes	100.0	100.0	100.0
AGE			
Under 25	32.9	31.8	32.1
25-34	36.5	28.4	30.3
35 and Over	30.6	39.8	37.6
All Age Groups	100.0	100.0	100.0
MARITAL STATUS			
Married	52.7	49.5	50.2
Not Married	47.3	50.5	49.8
Total	100.0	100.0	100.0

Table D-5
Percentage Distribution of Trainees' Total Years of Education, Years of U.S. Education, and Education in English by Mother Tongue

Years of Education	Mother Tongue					
	English	Total all Non-English Mother Tongues	Spanish	Chinese	Other	Total All Mother Tongues
Total years of foreign and U.S. education:	(n=32)	(n=686)	(n=532)	(n=84)	(n=70)	(n=718)
0 - 6	-0-	16.9	16.7	17.9	17.1	16.2
7 - 9	18.8	20.4	22.0	20.2	8.6	20.3
10 - 11	40.6	18.8	19.0	14.3	22.9	19.8
12 or more	40.6	43.9	42.3	47.6	51.4	43.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total U.S. education:	(n=32)	(n=685)	(n=531)	(n=84)	(n=70)	(n=717)
0	-0-	60.1	59.5	84.5	35.7	57.5
1 - 2	3.1	12.4	11.5	10.7	21.4	12.0
3 - 4	-0-	4.9	5.5	1.2	4.3	4.6
5 - 6	-0-	3.9	4.3	2.4	2.9	3.8
7 - 9	15.7	5.8	6.8	-0-	5.7	6.3
10 - 11	40.6	5.3	5.1	1.2	11.4	6.7
12 or more	40.6	7.6	7.3	-0-	18.6	9.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total English schooling:	(n=32)	(n=676)	(n=523)	(n=84)	(n=69)	(n=708)
0	-0-	57.1	57.6	77.4	29.0	54.5
1 - 2	3.1	12.0	11.3	10.7	18.8	11.6
3 - 4	-0-	6.4	6.9	3.5	5.8	6.1
5 - 6	-0-	4.7	4.8	6.0	2.9	4.5
7 - 9	15.7	6.1	6.3	1.2	10.1	6.5
10 - 11	40.6	5.6	5.5	1.2	11.7	7.2
12 or more	40.6	8.1	7.6	-0-	21.7	9.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table D-6
Percentage Distribution of Trainees' Total Years of Education,
Years of U.S. Education, and Education in English by Country of Birth

	Country of Birth											
				Spanish-Speaking Countries								
Years of Education	U.S.	All Foreign Countries	All Spanish-Speaking Countries	Mexico	Cuba	Puerto Rico	Central America	Other Spanish	China-Hong Kong	Other Asian	Other	All Countries
Total years of foreign and U.S. education:	(n=129)	(n=589)	(n=470)	(n=88)	(n=225)	(n=47)	(n=44)	(n=66)	(n=80)	(n=32)	(n=7)	(n=718)
0 - 6	8.5	17.8	17.7	37.5	17.3	4.3	15.9	3.0	20.0	15.6	14.2	16.2
7 - 9	21.8	20.0	21.1	27.3	18.3	29.8	20.5	16.7	20.0	9.4	-0-	20.3
10 - 11	30.2	17.5	17.8	20.5	12.4	36.1	18.2	19.7	15.0	12.5	42.9	19.8
12 or more	39.5	44.7	43.4	14.7	52.0	29.8	45.4	60.6	45.0	62.5	42.9	43.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total U.S. education:	(n=129)	(n=588)	(n=469)	(n=88)	(n=225)	(n=46)	(n=44)	(n=66)	(n=80)	(n=32)	(n=7)	(n=717)
0	2.3	69.6	67.0	60.2	66.7	63.0	75.0	74.2	86.3	65.6	71.4	57.5
1 - 2	2.3	14.1	13.6	20.5	9.3	13.0	13.6	19.8	8.8	34.4	14.3	12.0
3 - 4	3.1	4.9	5.8	6.8	4.9	8.7	9.1	3.0	1.2	-0-	14.3	4.6
5 - 6	4.7	3.6	4.1	2.3	6.7	2.2	-0-	1.5	2.5	-0-	-0-	3.8
7 - 9	20.2	3.2	4.1	3.4	5.3	6.5	-0-	1.5	-0-	-0-	-0-	6.3
10 - 11	29.4	1.9	2.1	3.4	2.2	2.2	2.3	-0-	1.2	-0-	-0-	6.7
12 or more	38.0	2.7	3.3	3.4	4.9	4.4	-0-	-0-	-0-	-0-	-0-	9.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total English schooling:	(n=129)	(n=579)	(n=460)	(n=84)	(n=223)	(n=43)	(n=44)	(n=66)	(n=80)	(n=32)	(n=7)	(n=708)
0	2.3	66.1	65.0	60.7	66.4	55.8	65.9	71.2	80.0	50.0	57.1	54.5
1 - 2	2.3	13.7	13.3	16.7	9.4	14.0	13.6	21.2	8.8	28.1	28.6	11.6
3 - 4	3.1	6.7	7.4	7.1	5.8	9.3	15.9	6.1	2.5	9.3	-0-	6.1
5 - 6	3.9	4.7	4.8	4.7	7.3	2.3	2.3	-0-	6.3	-0-	-0-	4.5
7 - 9	20.9	3.3	3.3	3.6	3.1	9.3	-0-	1.5	1.2	6.3	14.3	6.5
10 - 11	29.5	2.2	2.6	3.6	3.1	2.3	2.3	-0-	1.2	-0-	-0-	7.2
12 or more	38.0	3.3	3.6	3.6	4.9	7.0	-0-	-0-	-0-	6.3	-0-	9.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-7
Percentage Distribution of Trainees' Total Years of Education, Years of U.S. Education, and Education in English by Sex

Years of Education	Sex		
	Male	Female	Both Sexes
Total years of foreign and U.S. education:	(n=286)	(n=432)	(n=718)
0 - 6	15.0	16.9	16.2
7 - 9	22.7	18.8	20.3
10 - 11	21.7	18.5	19.8
12 or more	40.6	45.8	43.7
Total	100.0	100.0	100.0
Total U.S. education:	(n=286)	(n=431)	(n=717)
0	54.9	59.2	57.5
1 - 2	11.2	12.5	12.0
3 - 4	5.2	4.2	4.6
5 - 6	3.5	3.9	3.8
7 - 9	8.4	4.9	6.4
10 - 11	8.8	5.6	6.8
12 or more	8.0	9.7	9.1
Total	100.0	100.0	100.0
Total English schooling:	(n=292)	(n=426)	(n=708)
0	51.4	56.6	54.5
1 - 2	11.0	12.0	11.6
3 - 4	7.1	5.4	6.1
5 - 6	3.1	5.4	4.5
7 - 9	9.6	4.4	6.5
10 - 11	8.9	6.1	7.2
12 or more	8.9	10.1	9.6
Total	100.0	100.0	100.0

Table D-8
Percentage Distribution of Trainees' Total Years of Education, Years of U.S. Education, and Education in English by Age

Years of Education	Age			
	Under 25	25-34	35 and Over	All Age Groups
Total years of foreign and U.S. education:	(n=230)	(n=217)	(n=270)	(n=717)
0 - 6	6.5	12.9	27.0	16.2
7 - 9	19.1	21.2	20.7	20.4
10 - 11	31.8	18.4	10.7	19.8
12 or more	42.6	47.5	41.6	43.6
Total	100.0	100.0	100.0	100.0
Total U.S. education:	(n=230)	(n=217)	(n=269)	(n=716)
0	33.9	58.5	76.6	57.4
1 - 2	10.0	13.4	12.6	12.0
3 - 4	5.7	4.1	4.1	4.6
5 - 6	5.7	5.1	1.1	3.8
7 - 9	10.9	6.9	1.9	6.3
10 - 11	14.7	6.5	0.4	6.8
12 or more	19.1	5.5	3.3	9.1
Total	100.0	100.0	100.0	100.0
Total English schooling:	(n=227)	(n=214)	(n=266)	(n=707)
0	29.5	54.2	76.3	54.6
1 - 2	10.1	13.6	11.3	11.6
3 - 4	9.3	4.7	4.5	6.1
5 - 6	6.2	6.1	1.9	4.5
7 - 9	9.7	7.9	2.3	6.4
10 - 11	15.9	6.5	0.4	7.2
12 or more	19.3	7.0	3.3	9.6
Total	100.0	100.0	100.0	100.0

Table D-9
Percentage Distribution of Trainee MELP
Understanding Ratings by Type of Program

MELP Understanding Rating	Program Type		
	Subpart 3 (n=167)	Non-Subpart 3 (n=551)	All Programs (n=718)
1 - Not at all	3.6	3.4	3.5
2 - Just a few words	21.0	20.1	20.3
3 - More than a few words	19.1	22.0	21.3
4 - Well	42.5	34.9	36.7
5 - Very Well	13.8	19.6	18.2
TOTAL	100.0	100.0	100.0

Table D-10
Percentage Distribution of Trainee MELP
Speaking Ratings by Type of Program

MELP Speaking Rating	Program Type		
	Subpart 3 (n=166)	Non-Subpart 3 (n=550)	All Programs (n=716)
1 - Not at all	9.0	6.9	7.4
2 - Just a few words	17.5	21.2	20.4
3 - More than a few words	33.2	31.3	31.7
4 - Well	36.7	25.3	27.9
5 - Very Well	3.6	15.3	12.6
TOTAL	100.0	100.0	100.0

Table D-11
Percentage Distribution of Trainee MELP
Reading Ratings by Type of Program

MELP Reading Rating	Program Type		
	Subpart 3 (n=131)	Non-Subpart 3 (n=430)	All Programs (n=561)
1 - Not at all	0.8	1.2	1.1
2 - Just a few words	13.7	12.6	12.8
3 - More than a few words	31.3	25.8	27.1
4 - Well	44.3	37.7	39.2
5 - Very well	9.9	22.7	19.8
TOTAL	100.0	100.0	100.0

Table D-12
Percentage Distribution of Trainee
Ilyin Oral Interview Scores by Type of Program

Total Score on Ilyin Oral Interview	Program Type		
	Subpart 3 (n=167)	Non-Subpart 3 (n=550)	All Programs (n=717)
Failed screen	15.0	17.8	17.2
Failed orientation	6.6	4.2	4.7
Subtotal	21.6	22.0	21.9
0-24	10.8	17.6	16.0
Subtotal	32.4	39.6	37.9
25-39	10.8	9.3	9.6
40-59	22.1	16.2	17.6
60-74	16.1	14.9	15.2
75+	18.6	20.0	19.7
TOTAL	100.0	100.0	100.0

Table D-13
Percentage Distribution of Trainee MELP
Understanding Ratings by Mother Tongue

MELP Understanding Rating	Mother Tongue					
	English (n=32)	Total All Non-English Mother Tongues (n=686)	Spanish (n=532)	Chinese (n=84)	Other (n=70)	Total All Mother Tongues (n=718)
1 - Not at all	0.0	3.6	2.3	14.3	1.4	3.5
2 - Just a few words	0.0	21.4	21.8	25.0	12.9	20.3
3 - More than a few words	0.0	22.3	23.5	25.0	10.0	21.3
4 - Well	28.1	37.0	35.3	29.7	58.6	36.7
5 - Very Well	71.9	15.7	17.1	6.0	17.1	18.2
TOTAL	100.0	100.0	100.0	100	100.0	100.0

Table D-14
Percentage Distribution of Trainee MELP
Speaking Ratings by Mother Tongue

MELP Speaking Rating	Mother Tongue					
	English (n=32)	Total All Non-English Mother Tongues (n=684)	Spanish (n=530)	Chinese (n=84)	Other (n=70)	Total All Mother Tongues (n=716)
1 - Not at all	0.0	7.7	5.7	25.0	2.9	7.4
2 - Just a few words	0.0	21.4	23.8	17.9	7.1	20.4
3 - More than a few words	0.0	33.2	34.1	32.1	27.1	31.7
4 - Well	34.4	27.6	25.3	25.0	48.6	27.9
5 - Very Well	65.6	10.1	11.1	0.0	14.3	12.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Table D-15
Percentage Distribution of Trainee MELP
Reading Ratings by Mother Tongue

MELP Reading Rating	Mother Tongue					
	English (n=31)	Total All Non-English Mother Tongues (n=530)	Spanish (n=433)	Chinese (n=33)	Other (n=64)	Total All Mother Tongues (n=561)
1 - Not at all	0.0	1.1	1.2	3.0	0.0	1.1
2 - Just a few words	0.0	13.6	14.1	9.1	12.5	12.8
3 - More than a few words	0.0	28.7	28.9	48.5	17.2	27.1
4 - Well	41.9	39.1	37.4	33.3	53.1	39.2
5 - Very well	58.1	17.5	18.4	6.1	17.2	19.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Table D-16
Percentage Distribution of Trainee
Ilyin Oral Interview Scores by Mother Tongue

Total Score on Ilyin Oral Interview	Mother Tongue					
	English (n=32)	Total All Non-English Mother Tongues (n=685)	Spanish (n=532)	Chinese (n=84)	Other (n=69)	Total All Mother Tongues (n=717)
Failed screen	0.0	18.0	17.3	33.3	4.3	17.2
Failed orientation Subtotal	0.0 0.0	5.0 23.0	5.6 22.9	3.6 36.9	1.4 5.7	4.7 21.9
0-24 Subtotal	3.1 3.1	16.6 39.6	18.0 40.9	7.1 44.0	17.4 23.1	16.0 37.9
25-39	0.0	10.1	9.2	13.1	13.0	9.6
40-59	6.3	18.1	17.4	26.3	14.6	17.6
60-74	25.0	14.7	14.8	8.3	21.8	15.2
75+	65.6	17.5	17.7	8.3	27.5	19.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Table D-17
Percentage Distribution of Trainee MELP
Understanding Ratings by Country of Birth

MELP Understanding Rating	Country of Birth											
				Spanish-Speaking Countries								
	U.S. (n=129)	All Foreign Countries (n=589)	All Spanish-Speaking Countries (n=470)	Mexico (n=88)	Cuba (n=225)	Puerto Rico (n=47)	Central America (n=44)	Other Spanish (n=66)	China-Hong Kong (n=80)	Other Asian (n=32)	Other (n=7)	All Countries (n=718)
1 - Not at all	0.0	4.2	2.6	2.3	3.6	0.0	4.5	0.0	15.0	0.0	14.3	3.5
2 - Just a few words	3.1	24.1	24.7	34.1	28.4	10.6	20.5	12.1	23.7	21.9	0.0	20.3
3 - More than a few words	1.6	25.7	26.3	21.5	23.1	42.6	25.0	33.3	25.0	18.7	14.3	21.3
4 - Well	45.7	34.6	33.8	30.7	30.7	34.0	36.4	47.0	30.0	53.1	57.1	36.7
5 - Very Well	49.6	11.4	12.6	11.4	14.2	12.8	13.6	7.6	6.3	6.3	14.3	18.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-18
Percentage Distribution of Trainee MELP
Speaking Ratings by Country of Birth

MELP Speaking Rating	Country of Birth											
				Spanish-Speaking Countries								
	U.S. (n=129)	All Foreign Countries (n=587)	All Spanish-Speaking Countries (n=468)	Mexico (n=87)	Cuba (n=224)	Puerto Rico (n=47)	Central America (n=44)	Other Spanish (n=66)	China-Hong Kong (n=80)	Other Asian (n=32)	Other (n=7)	All Countries (n=716)
1 - Not at all	0.0	9.0	6.4	9.2	8.5	0.0	2.3	3.0	26.3	3.1	14.3	7.4
2 - Just a few words	3.1	24.2	26.7	34.5	29.0	21.3	15.9	19.7	16.3	12.5	0.0	20.4
3 - More than a few words	5.4	37.5	37.8	25.3	34.8	48.9	47.7	50.0	32.4	43.7	42.8	31.7
4 - Well	18.9	23.3	22.0	25.3	17.9	23.4	29.6	25.8	25.0	34.4	42.9	27.9
5 - Very Well	12.6	6.0	7.1	5.7	9.8	6.4	4.5	1.5	0.0	6.3	0.0	12.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-19
Percentage Distribution of Trainee MELP
Reading Ratings by Country of Birth

MELP Reading Rating	Country of Birth											
				Spanish-Speaking Countries								
	U.S. (n=122)	All Foreign Countries (n=439)	All Spanish-Speaking Countries (n=375)	Mexico (n=77)	Cuba (n=167)	Puerto Rico (n=36)	Central America (n=36)	Other Spanish (n=59)	China-Hong Kong (n=32)	Other Asian (n=26)	Other (n=6)	All Countries (n=561)
1 - Not at all	0.8	1.1	1.1	0.0	1.8	0.0	0.0	1.7	3.1	0.0	0.0	1.1
2 - Just a few words	3.3	15.5	16.0	32.5	14.4	5.6	11.1	8.5	12.5	15.4	0.0	12.8
3 - More than a few words	1.6	34.2	33.1	28.6	28.1	47.2	41.7	39.0	43.8	38.5	33.3	27.1
4 - Well	54.9	34.9	34.4	25.4	37.7	30.5	36.1	40.7	34.4	38.5	50.0	39.2
5 - Very Well	39.1	14.3	15.4	15.5	18.0	16.7	11.1	10.1	6.2	7.6	16.7	19.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-20
Percentage Distribution of Trainee
Ilyin Oral Interview Scores by Country of Birth

Total Score on Ilyin Oral Interview	Country of Birth											
				Spanish-Speaking Countries								
	U.S. (n=129)	All Foreign Countries (n=588)	All Spanish-Speaking Countries (n=470)	Mexico (n=88)	Cuba (n=225)	Puerto Rico (n=47)	Central America (n=44)	Other Spanish (n=66)	China-Hong Kong (n=80)	Other Asian (n=31)	Other (n=7)	All Countries (n=717)
Failed screen	0.8	20.7	19.6	22.7	24.0	2.1	11.4	18.2	33.8	6.5	14.3	17.2
Failed orientation Subtotal	0.0 0.8	5.8 26.5	6.4 26.0	4.5 27.2	6.7 30.7	2.1 4.2	13.6 25.0	6.1 24.3	5.0 38.8	0.0 6.5	0.0 14.3	4.7 21.9
0-24 Subtotal	6.2 7.0	18.2 44.7	20.0 46.0	25.0 52.2	16.9 47.6	29.8 34.0	25.0 50.0	13.6 37.9	7.5 46.3	19.4 25.9	14.3 28.6	16.0 37.9
25-39	7.8	10.0	8.9	8.0	7.1	14.9	1.8	15.2	12.5	16.1	28.6	9.6
40-59	10.9	19.0	17.7	11.4	17.3	21.3	20.5	22.7	23.8	29.0	14.3	17.6
60-74	21.7	13.8	14.4	15.9	12.4	14.9	13.6	19.7	8.7	16.1	14.3	15.2
75+	52.6	12.5	13.0	12.5	15.6	14.9	11.4	4.5	8.7	12.9	14.2	19.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-21
Percentage Distribution of Foreign-Born Trainees'
MELP Understanding Ratings by Number of Years Lived in U.S.

MELP Understanding Rating	Years in U.S.			
	0-5 years (n=270)	6-15 years (n=226)	16 or More years (n=88)	Total years (n=584)
1 - Not at all	7.0	1.3	3.4	4.3
2 - Just a few words	27.4	26.5	9.1	24.3
3 - More than a few words	29.6	27.1	10.2	25.7
4 - Well	30.4	35.4	44.3	34.4
5 - Very Well	5.6	9.7	33.0	11.3
TOTAL	100.0	100.0	100.0	100.0

Table D-22
Percentage Distribution of Foreign-Born Trainees'
MELP Speaking Ratings by Number of Years Lived in U.S.

MELP Speaking Rating	Years in U.S.			
	0-5 years (n=270)	6-15 years (n=225)	16 or More years (n=87)	Total years (n=582)
1 - Not at all	13.3	4.9	6.9	9.1
2 - Just a few words	25.2	30.2	6.9	24.4
3 - More than a few words	39.7	36.5	32.2	37.3
4 - Well	20.7	23.1	31.0	23.2
5 - Very Well	1.1	5.3	23.0	6.0
TOTAL	100.0	100.0	100.0	100.0

Table D-23
Percentage Distribution of Foreign-Born Trainees'
MELP Reading Ratings by Number of Years Lived in U.S.

MELP Reading Rating	Years in U.S.			
	0-5 years (n=186)	6-15 years (n=173)	16 or More years (n=76)	Total years (n=435)
1 - Not at all	1.6	1.2	0.0	1.1
2 - Just a few words	20.5	15.6	3.9	15.6
3 - More than a few words	41.9	30.1	22.4	33.8
4 - Well	30.1	38.6	39.5	35.2
5 - Very Well	5.9	14.5	34.2	14.3
TOTAL	100.0	100.0	100.0	100.0

Table D-24
Percentage Distribution of Foreign-Born Trainees'
Ilyin Oral Interview Scores by Number of Years Lived in U.S.

Total Score on Ilyin Oral Interview	Years in U.S.			
	0-5 years (n=269)	6-15 years (n=226)	16 or More years (n=88)	Total years (n=583)
Failed screen	25.3	20.8	8.0	20.9
Failed orientation	7.4	4.9	3.4	5.8
Subtotal	32.7	25.7	11.4	26.7
0-24	17.5	19.9	14.8	18.0
Subtotal	50.2	45.6	26.2	44.7
25-39	13.0	8.4	5.7	10.1
40-59	18.6	19.5	18.2	18.9
60-74	11.5	13.7	21.5	13.9
75+	6.7	12.8	28.4	12.4
TOTAL	100.0	100.0	100.0	100.0

Table D-25
Percentage Distribution of Trainee MELP
Understanding Ratings by Sex

MELP Understanding Rating	Sex		
	Male (n=286)	Female (n=432)	Both Sexes (n=718)
1 - Not at all	2.1	4.4	3.5
2 - Just a few words	20.3	20.4	20.3
3 - More than a few words	21.6	21.1	21.3
4 - Well	35.0	37.7	36.7
5 - Very Well	21.0	16.4	18.2
TOTAL	100.0	100.0	100.0

Table D-26
Percentage Distribution of Trainee MELP
Speaking Ratings by Sex

MELP Speaking Rating	Sex		
	Male (n=286)	Female (n=430)	Both Sexes (n=716)
1 - Not at all	5.9	8.4	7.4
2 - Just a few words	21.3	19.8	20.4
3 - More than a few words	28.7	33.7	31.7
4 - Well	28.7	27.4	27.9
5 - Very Well	15.4	10.7	12.6
TOTAL	100.0	100.0	100.0

Table D-27
Percentage Distribution of Trainee MELP
Reading Ratings by Sex

MELP Reading Rating	Sex		
	Male (n=216)	Female (n=345)	Both Sexes (n=561)
1 - Not at all	0.5	1.4	1.1
2 - Just a few words	13.4	12.5	12.8
3 - More than a few words	24.5	28.7	27.1
4 - Well	36.1	41.2	39.2
5 - Very well	25.5	16.2	19.8
TOTAL	100.0	100.0	100.0

Table D-28
Percentage Distribution of Trainee
Ilyin Oral Interview Scores by Sex

Total Score on Ilyin Oral Interview	Sex		
	Male (n=286)	Female (n=431)	Both Sexes (n=717)
Failed screen	18.2	16.5	17.2
Failed orientation	4.9	4.6	4.7
Subtotal	23.1	21.1	21.9
0-24	19.2	13.9	16.0
Subtotal	42.3	35.0	37.9
25-39	10.8	8.8	9.6
40-59	13.7	20.2	17.6
60-74	15.0	15.4	15.2
75+	18.2	20.6	19.7
TOTAL	100.0	100.0	100.0

Table D-29
Percentage Distribution of Trainee MELP
Understanding Ratings by Age

MELP Understanding Rating	Age			
	Under 25 (n=230)	25-34 (n=217)	35 or Over (n=270)	Total (n=717)
1 - Not at all	0.4	2.3	7.0	3.5
2 - Just a few words	12.2	14.3	32.2	20.4
3 - More than a few words	17.4	21.6	24.1	21.1
4 - Well	38.7	43.8	29.3	36.7
5 - Very Well	31.3	18.0	7.4	13.3
TOTAL	100.0	100.0	100.0	100.0

Table D-30
Percentage Distribution of Trainee MELP
Speaking Ratings by Age

MELP Speaking Rating	Age			
	Under 25 years (n=230)	25-34 years (n=216)	35 or More years (n=269)	Total years (n=715)
1 - Not at all	2.6	5.6	13.0	7.4
2 - Just a few words	12.6	15.2	31.2	20.4
3 - More than a few words	23.9	38.0	33.2	31.6
4 - Well	38.3	29.6	17.8	28.0
5 - Very Well	22.6	11.6	4.8	12.6
TOTAL	100.0	100.0	100.0	100.0

Table D-31
Percentage Distribution of Trainee MELP
Reading Ratings by Age

MELP Reading Rating	Age			
	Under 25 years (n=201)	25-34 years (n=170)	35 or Over years (n=189)	Total years (n=560)
1 - Not at all	0.0	1.2	2.1	1.1
2 - Just a few words	10.0	9.4	19.0	12.9
3 - More than a few words	22.9	25.8	32.3	27.0
4 - Well	43.7	41.2	32.8	39.3
5 - Very Well	23.4	22.4	13.8	19.7
TOTAL	100.0	100.0	100.0	100.0

Table D-32
Percentage Distribution of Trainee
Ilyin Oral Interview Scores by Age

Total Score on Ilyin Oral Interview	Age			
	Under 25 years (n=230)	25-34 years (n=216)	35 or Over years (n=270)	Total years (n=716)
Failed screen	7.8	13.0	28.5	17.2
Failed orientation Subtotal	2.2 10.0	3.7 16.7	7.8 36.3	4.7 21.9
0-24 Subtotal	13.0 23.0	13.9 30.6	20.0 56.3	15.9 37.8
25-39	8.3	13.4	7.8	9.6
40-59	15.7	21.7	15.9	17.7
60-74	15.2	17.6	13.3	15.2
75+	37.8	16.7	6.7	19.7
TOTAL	100.0	100.0	100.0	100.0

Table D-33
Percentage Distribution of Trainee MELP
Understanding Ratings by Total Years of Education

MELP Understanding Rating	Total Years of Education				
	0-6 years (n=116)	7-9 years (n=146)	10-11 years (n=142)	12 or More years (n=314)	Total years (n=718)
1 - Not at all	11.2	2.1	3.5	1.3	3.5
2 - Just a few words	52.7	32.2	4.9	9.9	20.3
3 - More than a few words	17.2	26.6	18.3	21.6	21.3
4 - Well	17.2	29.5	47.9	42.0	36.7
5 - Very Well	1.7	9.6	25.4	25.2	18.2
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-34
Percentage Distribution of Trainee MELP
Speaking Ratings by Total Years of Education

MELP Speaking Rating	Total Years of Education				
	0-6 years (n=114)	7-9 years (n=146)	10-11 years (n=142)	12 or More years (n=314)	Total years (n=716)
1 - Not at all	26.3	6.2	5.6	1.9	7.4
2 - Just a few words	41.2	34.9	7.7	11.8	20.4
3 - More than a few words	19.3	26.0	33.8	37.9	31.7
4 - Well	11.4	26.0	32.4	32.8	27.9
5 - Very Well	1.8	6.9	20.5	15.6	12.6
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-35
Percentage Distribution of Trainee MELP
Reading Ratings by Total Years of Education

MELP Reading Rating	Total Years of Education				
	0-6 years (n=64)	7-9 years (n=107)	10-11 years (n=121)	12 or More years (n=269)	Total years (n=561)
1 - Not at all	1.5	0.9	0.8	1.1	1.1
2 - Just a few words	51.5	16.8	4.1	5.9	12.8
3 - More than a few words	21.9	35.5	25.7	25.7	27.1
4 - Well	18.8	32.8	44.6	44.3	39.2
5 - Very Well	6.3	14.0	24.8	23.0	19.8
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-36
Percentage Distribution of Trainee
Ilyin Oral Interview Scores by Total Years of Education

Total Score on Ilyin Oral Interview	Total Years of Education				
	0-6 years (n=115)	7-9 years (n=146)	10-11 years (n=142)	12 or More years (n=314)	Total years (n=717)
Failed screen	49.6	23.3	7.0	7.0	17.2
Failed orientation	9.6	8.9	1.4	2.5	4.7
Subtotal	59.2	32.2	8.4	9.5	21.9
0-24	20.9	17.8	13.4	14.6	16.0
Subtotal	80.1	50.0	21.8	24.1	37.9
25-39	6.1	11.0	12.7	8.9	9.6
40-59	7.0	8.2	16.9	26.1	17.6
60-74	3.4	17.8	19.0	16.7	15.2
75+	3.4	13.0	29.6	24.2	19.7
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-37
Percentage Distribution of Trainee MELP Understanding Ratings
by Total Years of Education in the U.S.

MELP Understanding Rating	Total Years of Education in U.S.							
	0 years (n=412)	1-2 years (n=86)	3-4 years (n=33)	5-6 years (n=27)	7-9 years (n=45)	10-11 years (n=49)	12 or More years (n=65)	Total years (n=717)
1 - Not at all	6.1	0.0	0.0	0.0	0.0	0.0	0.0	3.5
2 - Just a few words	31.3	16.3	6.1	0.0	2.2	0.0	0.0	20.4
3 - More than a few words	27.4	29.1	15.1	14.8	6.7	0.0	3.0	21.1
4 - Well	30.3	46.5	63.6	55.6	57.8	38.8	26.2	36.7
5 - Very Well	4.9	8.1	15.2	29.6	33.3	61.2	70.8	18.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-38
Percentage Distribution of Trainee MELP Speaking Ratings
by Total Years of Education in the U.S.

MELP Speaking Rating	Total Years of Education in U.S.							
	0 years (n=410)	1-2 years (n=86)	3-4 years (n=33)	5-6 years (n=27)	7-9 years (n=45)	10-11 years (n=49)	12 or More years (n=65)	Total years (n=715)
1 - Not at all	12.7	1.2	0.0	0.0	0.0	0.0	0.0	7.1
2 - Just a few words	31.5	15.1	6.1	0.0	4.4	0.0	0.0	20.4
3 - More than a few words	38.5	45.4	39.3	29.6	13.3	0.0	3.1	31.6
4 - Well	16.1	36.0	45.5	48.2	55.6	42.9	44.6	28.0
5 - Very Well	1.2	2.3	9.1	22.2	26.7	57.1	52.3	12.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-39
Percentage Distribution of Trainee MELP Reading Ratings
by Total Years of Education in the U.S.

MELP Reading Rating	Total Years of Education in U.S.							
	0 years (n=287)	1-2 years (n=70)	3-4 years (n=30)	5-6 years (n=25)	7-9 years (n=40)	10-11 years (n=48)	12 or More years (n=60)	Total years (n=560)
1 - Not at all	1.0	2.9	0.0	0.0	0.0	2.1	0.0	1.1
2 - Just a few words	21.3	12.9	3.3	0.0	0.0	2.1	0.0	12.9
3 - More than a few words	38.3	35.7	30.0	12.0	7.5	0.0	1.7	27.0
4 - Well	32.1	34.2	40.0	52.0	67.5	54.2	43.3	39.3
5 - Very well	7.3	14.3	26.7	36.0	25.0	41.7	55.0	19.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-40
Percentage Distribution of Trainee Ilyin Oral Interview Scores
by Total Years of Education in the U.S.

Total Score on Ilyin Oral Interview	Total Years of Education in U.S.							
	0 years (n=412)	1-2 years (n=85)	3-4 years (n=33)	5-6 years (n=27)	7-9 years (n=45)	10-11 years (n=49)	12 or More years (n=65)	Total years (n=716)
Failed screen	28.2	7.1	3.0	0.0	0.0	0.0	0.0	17.2
Failed orientation	7.5	2.4	0.0	0.0	2.2	0.0	0.0	4.7
Subtotal	35.7	9.5	3.0	0.0	2.2	0.0	0.0	21.9
0-24	20.1	22.4	18.2	3.7	4.4	4.1	1.5	15.9
Subtotal	55.8	31.9	21.2	3.7	6.6	4.1	1.5	37.8
25-39	10.0	14.1	9.1	3.7	20.0	4.1	1.5	9.6
40-59	18.2	23.4	27.3	22.2	8.9	10.2	10.8	17.7
60-74	11.2	16.5	30.3	22.2	22.2	22.4	18.5	15.2
75+	4.8	14.1	12.1	48.2	42.3	59.2	67.7	19.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-41
Percentage Distribution of Trainee MELP Understanding Ratings
by Total Years of Education in English

MELP Understanding Rating	Years of Education in English							
	0 years (n=386)	1-2 years (n=82)	3-4 years (n=43)	5-6 years (n=32)	7-9 years (n=46)	10-11 years (n=51)	12 or More years (n=68)	Total years (n=708)
1 - Not at all	6.5	0.0	0.0	0.0	0.0	0.0	0.0	3.5
2 - Just a few words	32.6	17.1	4.7	3.1	2.2	0.0	0.0	20.3
3 - More than a few words	27.2	26.8	27.8	3.1	13.0	0.0	2.9	20.9
4 - Well	29.3	48.8	51.2	62.5	56.5	39.2	27.9	36.8
5 - Very Well	4.4	7.3	16.3	31.3	28.3	60.8	69.2	18.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-42
Percentage Distribution of Trainee MELP Speaking Ratings
by Total Years of Education in English

MELP Speaking Rating	Years of Education in English							
	0 years (n=384)	1-2 years (n=82)	3-4 years (n=43)	5-6 years (n=32)	7-9 years (n=46)	10-11 years (n=51)	12 or More years (n=68)	Total years (n=706)
1 - Not at all	13.5	0.0	0.0	0.0	0.0	0.0	0.0	7.4
2 - Just a few words	32.8	17.1	4.7	3.1	4.3	0.0	0.0	20.5
3 - More than a few words	39.1	42.7	46.5	12.5	19.6	2.0	2.9	31.3
4 - Well	13.8	39.0	37.2	59.4	56.5	43.1	44.2	28.1
5 - Very Well	0.8	1.2	11.6	25.0	19.6	54.9	52.9	12.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-43
Percentage Distribution of Trainee MELP Reading Ratings
by Total Years of Education in English

MELP Reading Rating	Years of Education in English							
	0 years (n=264)	1-2 years (n=66)	3-4 years (n=40)	5-6 years (n=29)	7-9 years (n=41)	10-11 years (n=50)	12 or More years (n=63)	Total years (n=553)
1 - Not at all	1.1	3.0	0.0	0.0	0.0	2.0	0.0	1.1
2 - Just a few words	22.0	12.1	2.5	0.0	4.9	2.0	0.0	12.7
3 - More than a few words	37.9	34.8	40.0	10.3	9.8	0.0	3.2	26.8
4 - Well	32.2	34.8	42.5	48.3	65.9	54.0	42.8	39.8
5 - Very Well	6.8	15.3	15.0	41.4	19.4	42.0	54.0	19.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-44
Percentage Distribution of Trainee Ilyin Oral Interview Scores
by Total Years of Education in English

Total Score on Ilyin Oral Interview	Years of Education in English							
	0 years (n=386)	1-2 years (n=82)	3-4 years (n=42)	5-6 years (n=32)	7-9 years (n=46)	10-11 years (n=51)	12 or More years (n=68)	Total years (n=707)
Failed screen	29.3	6.1	4.8	3.1	0.0	0.0	0.0	17.1
Failed orientation	8.0	2.4	0.0	0.0	2.2	0.0	0.0	4.8
Subtotal	37.3	8.5	4.8	3.1	2.2	0.0	0.0	21.9
0-24	19.9	20.7	16.7	0.0	10.9	3.9	2.9	15.6
Subtotal	57.2	29.2	21.5	3.1	13.1	3.9	2.9	37.5
25-39	10.9	12.3	7.1	3.1	21.7	3.9	1.5	9.8
40-59	17.6	28.0	26.2	18.8	8.7	9.8	10.3	17.5
60-74	10.1	15.9	23.8	34.4	23.9	23.5	19.1	15.4
75+	4.2	14.6	21.4	40.6	32.6	58.9	66.2	19.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-45
Percentage Distribution of Trainee MELP Understanding Ratings
by Proportion of Time Employed, Year Prior to Program Entry

MELP Understanding Rating	Proportion of Time Employed				
	0% (n=282)	1-50% (n=86)	51-99% (n=108)	100% (n=242)	Total (n=718)
1 - Not at all	4.3	1.2	4.6	2.9	3.5
2 - Just a few words	23.0	23.3	16.7	17.8	20.3
3 - More than a few words	20.9	17.4	27.8	20.2	21.3
4 - Well	35.1	36.0	39.8	37.2	36.7
5 - Very Well	16.7	22.1	11.1	21.9	18.2
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-46
Percentage Distribution of Trainee MELP Speaking Ratings
by Proportion of Time Employed, Year Prior to Program Entry

MELP Speaking Rating	Proportion of Time Employed				
	0% (n=281)	1-50% (n=86)	51-99% (n=107)	100% (n=242)	Total (n=716)
1 - Not at all	8.5	2.3	8.4	7.4	7.4
2 - Just a few words	22.4	22.1	20.6	17.4	20.4
3 - More than a few words	31.7	27.9	34.6	31.8	31.7
4 - Well	24.9	30.3	29.9	29.8	27.9
5 - Very Well	12.5	17.4	6.5	13.6	12.6
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-47
Percentage Distribution of Trainee MELP Reading Ratings
by Proportion of Time Employed, Year Prior to Program Entry

MELP Reading Rating	Proportion of Time Employed				
	0% (n=221)	1-50% (n=65)	51-99% (n=78)	100% (n=197)	Total (n=561)
1 - Not at all	0.5	4.6	1.3	0.5	1.1
2 - Just a few words	14.0	7.7	15.4	12.2	12.8
3 - More than a few words	29.0	30.8	24.3	24.9	27.1
4 - Well	37.5	44.6	43.6	37.5	39.2
5 - Very Well	19.0	12.3	15.4	24.9	19.8
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-48
Percentage Distribution of Trainee Ilyin Oral Interview Scores
by Proportion of Time Employed, Year Prior to Program Entry

Total Score on Ilyin Oral Interview	Proportion of Time Employed				
	0% (n=282)	1-50% (n=86)	51-99% (n=108)	100% (n=241)	Total (n=717)
Failed screen	17.4	14.0	21.3	16.2	17.2
Failed orientation	5.0	3.5	1.9	6.2	4.7
Subtotal	22.4	17.5	23.2	22.4	21.9
0-24	17.4	15.1	13.9	15.8	16.0
Subtotal	39.8	32.6	37.1	38.2	37.9
25-39	9.2	9.3	11.1	9.5	9.6
40-59	17.7	11.6	15.7	20.3	17.6
60-74	14.9	18.6	13.0	15.4	15.2
75+	16.4	27.9	23.1	16.6	19.7
TOTAL	100.0	100.0	100.0	100.0	100.0

Table D-49
Percentage Distribution of Trainee MELP
Understanding Ratings by Number of Weeks in Program

MELP Understanding Rating	Number of Weeks						
	0-4 weeks (n=113)	5-8 weeks (n=80)	9-12 weeks (n=159)	13-24 weeks (n=169)	25-36 weeks (n=81)	37 or More weeks (n=116)	Total weeks (n=718)
1 - Not at all	9.7	6.3	0.6	2.4	1.2	2.6	3.5
2 - Just a few words	18.6	17.5	25.2	16.6	25.9	19.0	20.3
3 - More than a few words	21.2	23.7	21.3	21.8	23.5	17.1	21.3
4 - Well	30.1	35.0	34.0	41.4	38.3	39.7	36.7
5 - Very Well	20.4	17.5	18.9	17.8	11.1	21.6	18.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-50
Percentage Distribution of Trainee MELP
Speaking Ratings by Number of Weeks in Program

MELP Speaking Rating	Number of Weeks						
	0-4 weeks (n=113)	5-8 weeks (n=80)	9-12 weeks (n=158)	13-24 weeks (n=169)	25-36 weeks (n=81)	37 or More weeks (n=115)	Total weeks (n=716)
1 - Not at all	14.2	11.3	1.9	7.7	6.2	6.1	7.4
2 - Just a few words	19.5	18.7	30.4	11.8	23.4	19.1	20.4
3 - More than a few words	23.0	36.2	27.8	40.8	37.0	25.2	31.7
4 - Well	27.4	17.5	28.5	28.5	27.2	34.8	27.9
5 - Very Well	15.9	16.3	11.4	11.2	6.2	14.8	12.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-51
Percentage Distribution of Trainee MELP
Reading Ratings by Number of Weeks in Program

MELP Reading Rating	Number of Weeks						
	0-4 weeks (n=76)	5-8 weeks (n=64)	9-12 weeks (n=123)	13-24 weeks (n=141)	25-36 weeks (n=61)	37 or More weeks (n=96)	Total weeks (n=561)
1 - Not at all	1.3	0.0	0.8	2.1	0.0	1.0	1.1
2 - Just a few words	15.8	15.6	16.3	7.8	11.5	12.5	12.8
3 - More than a few words	23.7	28.1	25.2	32.6	29.5	21.9	27.1
4 - Well	44.7	35.9	39.0	34.8	39.3	43.8	39.2
5 - Very Well	14.5	20.4	18.7	22.7	19.7	20.8	19.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-52
Percentage Distribution of Trainee
Ilyin Oral Interview Scores by Number of Weeks in Program

Total Score on Ilyin Oral Interview	Number of Weeks						
	0-4 weeks (n=112)	5-8 weeks (n=80)	9-12 weeks (n=159)	13-24 weeks (n=169)	25-36 weeks (n=81)	37 or More weeks (n=116)	Total weeks (n=717)
Failed screen	22.3	16.3	15.7	14.8	19.8	16.4	17.2
Failed orientation	1.8	7.5	6.3	4.1	3.7	5.2	4.7
Subtotal	24.1	23.8	22.0	18.9	23.5	21.6	21.9
0-24	17.0	17.5	21.4	15.4	13.6	9.5	16.0
Subtotal	41.1	41.3	43.4	34.3	37.1	31.1	37.9
25-39	4.4	8.7	9.4	15.4	11.1	6.0	9.6
40-59	10.7	17.4	17.0	21.9	22.2	15.5	17.6
60-74	16.1	13.8	12.6	14.2	17.3	19.0	15.2
75+	27.7	18.8	17.6	14.2	12.3	28.4	19.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table D-53
Percentage Distribution of Trainee
Usual Languages by Mother Tongue

Usual Language Domains	Mother Tongue				
	English	Spanish	Chinese	Other	Total All Mother Tongues
Usual Language:	(n=32)	(n=531)	(n=84)	(n=70)	(n=717)
English	81.2	11.1	0.0	31.4	14.9
Non-English	0.0	75.1	98.8	58.6	73.0
Both English and Non-English	18.8	13.8	1.2	10.0	12.1
Total	100.0	100.0	100.0	100.0	100.0
Usual Language With Vocational Instructor:	(n=32)	(n=532)	(n=84)	(n=70)	(n=718)
English	87.5	37.6	40.5	80.0	44.3
Non-English	3.1	52.1	51.2	8.6	45.5
Both English and Non-English	9.4	10.3	8.3	11.4	10.2
Total	100.0	100.0	100.0	100.0	100.0
Usual Language With Students:	(n=32)	(n=532)	(n=84)	(n=70)	(n=718)
English	81.3	18.1	1.2	58.6	22.8
Non-English	6.2	66.5	90.5	14.3	61.6
Both English and Non-English	12.5	15.4	8.3	27.1	15.6
Total	100.0	100.0	100.0	100.0	100.0
Usual Language At Home:	(n=32)	(n=532)	(n=84)	(n=70)	(n=718)
English	75.0	7.3	0.0	12.9	10.0
Non-English	6.2	80.8	97.6	64.2	77.9
Both English and Non-English	18.8	11.9	2.4	22.9	12.1
Total	100.0	100.0	100.0	100.0	100.0
Usual Language With Best Friend:	(n=32)	(n=530)	(n=84)	(n=68)	(n=714)
English	81.2	16.2	0.0	27.9	18.3
Non-English	9.4	74.0	97.6	53.0	71.9
Both English and Non-English	9.4	9.8	2.4	19.1	9.8
Total	100.0	100.0	100.0	100.0	100.0

Table D-54
Percentage Distribution of Trainees' Usual Occupations by Sex

Usual Occupation	Sex		
	Male (n=272)	Female (n=356)	Both Sexes (n=628)
MILITARY: (n=9)	*1.5*	*1.4*	*1.4*
PROFESSIONAL: (n=83)	*11.4*	*14.7*	*13.2*
Education	1.5	6.5	4.3
Admin. Specialists	5.5	3.1	4.1
Other	4.4	5.1	4.8
CLERICAL & SALES: (n=171)	*16.1*	*35.6*	*27.2*
Clerical	11.0	30.8	22.3
Sales	5.1	4.8	4.9
SERVICE: (n=97)	*13.6*	*16.8*	*15.5*
Food/Bev. Preparation	8.1	4.4	6.1
Other	5.5	12.4	9.4
FARMING: (n=35)	*9.6*	*2.5*	*5.6*
PROCESSING: (n=26)	*3.7*	*4.5*	*4.1*
MACHINE TRADES: (n=43)	*11.8*	*3.1*	*6.8*
Mech. & Mach. Repair	5.9	0.3	2.7
Metal mach. & Metal work	3.7	1.7	2.5
Other	2.2	1.1	1.6
BENCH WORK: (n=79)	*6.6*	*17.1*	*12.6*
Textile	3.7	11.8	8.3
Other	2.9	5.3	4.3
STRUCTURAL: (n=41)	*14.3*	*0.6*	*6.5*
Construction	6.2	0.0	2.7
Other	8.1	0.6	3.8
MISCELLANEOUS: (n=44)	*11.4*	*3.7*	*7.1*
Packaging	4.8	3.1	3.9
Other	6.6	0.6	3.2
ALL OCCUPATIONS	*100.0*	*100.0*	*100.0*

Table D-55
Percentage Distribution of Trainees' Usual Occupation by Age

Usual Occupation	Age			
	Under 25 (n=172)	25 -34 (n=204)	35 and Over (n=251)	All Age Groups (n=627)
MILITARY: (n=9)	*1.7*	*2.0*	*0.8*	*1.4*
PROFESSIONAL: (n=83)	*9.9*	*11.7*	*16.8*	*13.2*
Education	4.7	3.4	4.8	4.3
Admin. Specialists	1.7	3.4	6.4	4.1
Other	3.5	4.9	5.6	4.8
CLERICAL & SALES: (n=170)	*33.1*	*27.5*	*22.6*	*27.1*
Clerical	26.7	23.1	18.2	22.2
Sales	6.4	4.4	4.4	4.9
SERVICE: (n=97)	*12.2*	*15.8*	*17.4*	*15.6*
Food/Bev. Preparation	5.8	8.9	4.0	6.2
Other	6.4	6.9	13.4	9.4
FARMING: (n=35)	*10.5*	*4.4*	*3.2*	*5.6*
PROCESSING: (n=26)	*4.1*	*3.9*	*4.4*	*4.1*
MACHINE TRADES: (n=43)	*5.8*	*9.2*	*5.6*	*6.9*
Mech. & Mach. Repair	2.9	3.4	2.0	2.7
Metal mach. & Metal work	1.7	2.9	2.8	2.6
Other	1.2	2.9	0.8	1.6
BENCH WORK: (n=79)	*9.3*	*11.8*	*15.6*	*12.6*
Textile	6.4	6.9	10.8	8.3
Other	2.9	4.9	4.8	4.3
STRUCTURAL: (n=41)	*6.4*	*7.4*	*6.0*	*6.5*
Construction	1.7	3.5	2.8	2.7
Other	4.7	3.9	3.2	3.8
MISCELLANEOUS: (n=44)	*7.0*	*6.3*	*7.6*	*7.0*
Packaging	4.7	2.9	4.0	3.8
Other	2.3	3.4	3.6	3.2
ALL OCCUPATIONS	*100.0*	*100.0*	*100.0*	*100.0*

Table D-56

Selected Labor Force Statistics of Trainees
During Year Prior to Program Entry
(means)

Subgroup Characteristics	Average Labor Force Participation Rate		Percent of Total Time Employed		Average Unemployment Rate		Highest Weekly Job Earnings	
	n	Mean (%)	n	Mean (%)	n	Mean (%)	n	Mean ($)
All Trainees	718	58.2	718	48.5	517	23.3	377	143.64
Program Type								
Subpart 3	167	59.7	167	47.9	130	24.5	82	147.80
Non-Subpart 3	551	57.7	551	48.7	387	22.9	295	128.65
Mother Tongue								
English	32	40.9	32	26.1	21	40.0	14	147.79
Spanish	532	57.1	532	48.4	375	23.8	286	147.38
Chinese	84	74.3	84	64.0	72	13.6	43	114.63
Other	70	54.7	70	40.8	49	26.4	34	147.15
Country of Birth								
U.S.	129	55.5	129	39.6	91	32.1	70	144.79
Mexico	88	53.0	88	39.7	58	31.3	45	159.64
Cuba	225	60.2	225	55.9	158	16.0	130	149.98
Puerto Rico	47	51.0	47	28.2	35	52.9	17	132.59
Central America	44	50.9	44	46.2	33	24.4	24	121.63
Other Spanish	66	59.1	66	53.0	47	17.5	33	156.85
China-Hong Kong	80	75.6	80	65.6	68	13.1	41	115.54
Other Asian	32	41.4	32	33.3	20	20.3	14	134.50
Other	7	68.7	7	68.7	7	-0-	3	121.67
Sex								
Male	286	74.7	286	63.5	246	18.9	185	167.18
Female	432	47.2	432	38.6	271	27.3	192	120.95
Age								
Under 25	230	48.4	230	36.8	152	30.3	103	132.36
25-34	217	64.6	217	55.6	171	19.1	123	148.60
35 and Over	270	61.3	270	52.7	193	21.7	151	147.28

APPENDIX E

SELECTION AND DESCRIPTION OF ENGLISH LANGUAGE PROFICIENCY MEASURES

SELECTION AND DESCRIPTION OF ENGLISH LANGUAGE PROFICIENCY MEASURES

INTRODUCTION

Measures of English language proficiency were sought that were appropriate for use with limited English-speaking adults in bilingual vocational training programs. The criteria for the assessment instruments, test identification and review procedures, and descriptions of the measures selected for use in this study are discussed in this appendix.

CRITERIA FOR THE INSTRUMENTS

The criteria used for selecting the measures of English language proficiency are that:

- The target population is adults with limited English-speaking ability, from all language and cultural subgroups;
- The language skills assessed are:
  - oral production (speaking),
  - aural comprehension (listening), and,
  - reading comprehension;
- There is a sufficient range of difficulty to be able to measure reliably:
  - large differences among the target population in proficiency levels, and,
  - individual gains in proficiency.

Originally, a measure of occupational English proficiency was sought. A direct measure of job-specific English skills, applicable and appropriate to all occupational areas, was not available;[1] therefore, a measure of general proficiency was to be selected.

The study target population, adults with limited English-speaking ability in bilingual vocational training programs, represents a variety of language and cultural groups, including Spanish (Mexican, Puerto Rican, Cuban, etc.), Chinese (Mandarin and Cantonese), Vietnamese, Native American (Navajo, Lakota Sioux), Korean, Italian, Russian, and others. The proficiency measures could not be specific to one or two of these groups, but had to be appropriate to all.

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[1] An indirect measure of job-specific proficiency was used in the second wave of data collection.

The language skills to be assessed were those emphasized in bilingual vocational training programs. Most of the trainees would need to speak and understand spoken English for the jobs for which they are being trained, and some would need to comprehend written English. In many job environments, an adequate knowledge of general and occupational language need not be an advanced level of proficiency. Levels and types of skills vary by occupational area; for example, for several occupations (dental assistants, barbers) trainees need to know enough English to pass State licensing and/or certification requirements.

The proficiency levels of the trainees range from nil (no ability) to advanced; therefore, the measures selected would have to be capable of discriminating at all levels of English language proficiency. In addition, language skills were to be measured when trainees were enrolled in the programs, as well as at a period of time after training completion. The measures, then, would have to be apropriate for classification of large and small individual changes over time.

PROCEDURES FOR IDENTIFYING AND REVIEWING LANGUAGE ASSESSMENT INSTRUMENTS

Two methods were used to identify the language proficiency measures and to determine the appropriateness of each measure for use with limited English-speaking adults in bilingual vocational training programs. First, a literature search was conducted, and second, individuals knowledgeable about second language teaching and testing were contacted. The primary emphasis was on identifying published tests and measures that were most familiar to practitioners in the field, not inclusive of all available measures. Eighteen measures were identified, and a panel of experts in language testing and ESL were asked to assess the appropriateness of each measure.[1] Comparable information about each measure was presented on a grid and in narrative form in four major categories:

- Examinee Appropriateness, addressing:
  - Purposes of the measure
  - Language skills assessed
  - Target population
  - Cultural bias
  - Comprehensibility of directions, illustrations, and item formats
  - Response mode and form

[1] The panel included: Dr. Walter Stolz (development of MELP scales); Mary Jo Krowitz (development of measures of functional language proficiency); Pardee Lowe, Jr. (trainer of examiners of the Foreign Service Institute's Language Proficiency Ratings); Claudia Wilds (development of Foreign Service Institute's ratings); Dr. Ginny Redish (linguistics consultant); and, Mary Galvan (education consultant). Input and advice also were obtained from: Dr. Ty Hartwell (Research Triangle Institute); Dr. Burt Fisher (consultant to the Institute for Research on Poverty and Language, University of Wisconsin); staff of the National Center for Education Statistics of DHEW; staff of the Center for Applied Linguistics; and staff of the Job Corps in USDOL.

- Validity, addressing:

  - Content validity
  - Construct validity
  - Predictive validity
  - Concurrent validity

- Reliability, addressing:

  - Internal consistency, or replicability across items within the measure itself

- Administrative Usability, addressing:

  - Test Administration:
    -- Level of training test administrator
    -- Number of administrators per examinee
    -- Administration time
  - Scoring and Interpretation
    -- Objectivity of Scoring
    -- Score conversion
    -- Discrimination power (pre-post measure)
  - Adaptation
    -- Test purpose
    -- Norming sample
    -- Target population

This information was presented to the panel, who attended a workshop for the purpose of reviewing the identified measures and suggesting additional ones. (No other measures designed for adults were identified.)

SELECTION OF LANGUAGE MEASURES

The consensus of the panel, after reviewing and discussing the identified measures, was to assess proficiency in speaking and listening comprehension, and, in addition, to attempt to measure reading comprehension.[1] Three types of potential measures that best fit the selection criteria were pilot tested with trainees under actual field work conditions at two bilingual vocational training programs in California:

- a structured oral interview;

- an unstructured oral interview; and,

- a self-report.

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[1] However, since there were no available appropriate reading measures, it was not in the scope of work to develop such a measure, and the emphasis of the programs was not on reading, this language skill was measured indirectly.

In addition, a report of trainees' English language proficiency by instructors, based on the MELP rating scales, was pilot tested. The instructors were asked to rate speaking and listening comprehnesion only.

As a result of the pilot tests, the following measures were selected for the study:

- the Ilyin Oral Interview (structured);
- the MELP scales (self-reports); and,
- the instructors' reports of proficiency.

These language measures were found to be appropriate in the context of the interview situation and of bilingual vocational training programs and trainees. The measures were found to be easily administered and scored on a personal, individual basis in a relatively short time period. No special equipment or personnel were required for later analysis of the data. In addition, the MELP scales could be adapted to provide an indirect measure of job-specific language skills, that is, speaking, listening comprehension, and reading comprehension.

Another measure of oral proficiency that was pilot tested but not used in the study was a non-structured, naturalistic oral interview. The unstructured interview was designed to elicit descriptions or narratives on several topics, which would be tape recorded and analyzed at a later date for fluency, grammar, pronunciation, vocabulary, and comprehension, each on a five-point scale. Several problems with this approach necessitated its exclusion from the study. The major difficulty encountered was the elicitation of data from trainees at the lower proficiency levels. These trainees were unable to use English in this type of situation; that is, they did not have enough proficiency in English to produce a narrative sample of English that could be analyzed. Other problems that became evident during the pilot testing were that the trainees were frightened by the taping equipment, there were not enough available staff members who could analyze the data, there would not be enough discrimination among the scores if only this method of assessment were used, and the scores would be very subjective.

Ilyin Oral Interview

The Ilyin Oral Interview has been used for various purposes, including placement in ESL classes, screening for job training programs, showing gains in proficiency, and providing diagnostic information.

The Ilyin Oral Interview provides a combined score measure of aural comprehension and oral production in a picture-controlled situation. No reading or writing skills are used or assessed during the interview. Two forms of the interview have been developed, each containing 50 similar

items.[1] The scores can range from 0-100; each item receives a score of 0, 1, or 2. The scores are based on both the appropriateness of the content of the responses and on the accuracy of English grammar. There is more than one correct response for each item; that is, a response that is informationally appropriate to both the stimulus and the corresponding picture(s) is correct, and is scored as a "1." Accuracy of grammar and structure is scored only if the response is informationally appropriate; that is, an additional point is given if there are no errors of this type. This procedures allows differentiating degrees of fluency and accuracy.

The Ilyin Oral Interview also contains a means of screening out individuals who should not take the test. Two procedures are used. First, the individual is asked several questions to determine if his/her English ability is at too low a level to take the test. The second procedure determines if the individual can use and understand the concepts in the interview, for example, the sequencing of the pictures, distinguishing weekdays from weekends, etc.

Statistics and norms for the Interview are presented in the manual, including a description of the populations tested in developing the first edition of the Interview (over 1,000 people from many native language backgrounds in ESL classes, vocational programs, on-the-job training progams, etc.), reliability figures (ranging from .86 to .98), and construct and concurrent validity data.

To insure proper administration and consistency of measurement, or intra- and inter-rater reliability, two intensive two-day training sessions were held, with approximately 10 bilingual interviewers attending each session.[2] During the training sessions, Donna Ilyin assisted in the development of procedures to insure consistency, both in administering and scoring the interview, and served as the criterion for agreement.[3]

The MELP Scales

The MELP scales provide separate, self-reported proficiency ratings, on a five-point scale, of oral production and aural comprehension of English language ability. The two MELP questions asked and the possible responses are:

Questions:

1. How well do you understand spoken English?
2. How well do you speak English?

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[1]One form of the interview was used in this study because the two forms had not been correlated.

[2]All but one of the interviewers were non-native English speakers.

[3]After practicing administration and scoring procedures, the interviewers were tested. Those who had difficulty scoring the test were not permitted to conduct the interview in the field.

Response Categories:

a. Very Well
b. Well
c. Not Well
   (1) More than a few words
   (2) Just a few words
d. Not at All

The interviewer reads each question and response categories a. through d. to the respondent. If the respondent gives category c., the interviewer reads the two subcategories, one of which is selected by the respondent. For scoring purposes, the subcategories are converted to separate levels, and category c. is not used.

The MELP scales were developed for the purpose of estimating the population of limited English speakers. The measure was for use in the Survey of Income and Education, a large-scale national survey. Several constraints were placed on the type of measure to be developed because the assessment was to be carried out in a Census survey. The types of measures excluded were overt testing, recording responses electronically, and procedures that did not fit naturally into the interview. In addition, there was a preference for a measure consisting of a small series of direct questions, answerable by the usual respondent for the household about all members of the household.[1]

The MELP project was concerned with selecting the best possible MELP which conformed to the above specifications and gathering data on the validity of the instrument. The focus was on content and concurrent validity. The project staff, specialists, and consultants were experienced in language testing, linguistics and test development, represented a number of ethnic-linguistic groups and could determine "culture-fair" measures for all language groups. Concurrent validity was addressed by correlating the MELP items with "criterion" measures of English language proficiency. All measures were collected in one interview during field testing, and correlations were computed for all possible pairs of these variables. The "criterion" measures each represented a different approach to language assessment, and together measured reception, production, and communication skills. Product-moment correlation coefficients as well as discriminant function coefficients were reported for the total sample as well as for the ethnic-linguistic subgroups. (For all sites, the correlation for the combined MELP variable (speak and understand) and the factor score on the criterion measures was .57).

The MELP scale was adapted to provide an indirect measure of English reading proficiency for this study. A screening question was devised to determine if the respondent reads in English. The screening question is:

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[1] See Burton R. Fisher, Design Specifications for a Measure of Limited English-Speaking Ability in a National Survey, Final Report, Prepared for the National Center for Education Statistics, April, 1975, p.2.

"Do you sometimes read newspapers written in English?" If the response was "yes," the respondent was asked, "How well do you understand what you read in newspapers?" The scoring for the latter question was in accordance with the 5-point MELP scale shown above. It is not known whether persons who responded negatively to the screening question had no proficiency in reading English or only that they did not read English language newspapers.

APPENDIX F

COMPARISON OF MELP RATINGS AND SCORES ON ILYIN ORAL INTERVIEW

COMPARISON OF MELP RATINGS AND SCORES ON ILYIN ORAL INTERVIEW

The two measures of English language proficiency that were selected for the study, the MELP self-ratings and the Ilyin Oral Interview, assess speaking and understanding skills. The Interview scores are highly correlated with the various MELP ratings; however, there are some differences at the lowest proficiency levels, where scores on the Interview are lower than the corresponding MELP ratings. (See Tables F-1 and F-2.) It is likely that the correlations would be even higher if the low ends were similar.

The highest correlate with the Interview scores is the average of the MELP speaking and understanding ratings (r=+.78). This relationship is logical, since the Interview provides a combined score of speaking and understanding. As shown in Table F-1, more than four-fifths of the individuals who failed the screen or the orientation rated their English ability as "Not at all" or "Just a few words;" however, some of these persons did rate their proficiency as high as "Well."

Several factors may account for the discrepancy between the scores and ratings. It is possible that some individuals may over-rate their English language ability, providing higher but inaccurate MELP ratings. Other persons may have viewed the Interview as a test, and may have passively refused to participate by not answering correctly the questions in the screening and/or orientation sections. If this were the case, the MELP ratings might be a more accurate reflection of the individual's English language proficiency than the Interview score. The orientation used in the Interview to determine if an individual is capable of participating in the interview is not restricted to assessing language ability. Therefore, it cannot be concluded that "failing the orientation" is directly related to the MELP ratings.

Table F-1
Comparison of Trainees' MELP Understanding and Speaking Ratings With Their Scores on Ilyin Oral Interview, Spring-Summer 1978

MELP Ratings	Score on Ilyin Oral Interview						
	Failed Screen	Failed Orientation	0-24	25-39	40-59	60-74	75 and Over
Understanding	(n=123)	(n=34)	(n=115)	(n=69)	(n=126)	(n=109)	(n=141)
Not at all	17.1	8.8	0.9	-0-	-0-	-0-	-0-
Just a few words	65.0	47.1	31.3	13.0	2.4	1.8	-0-
More than a few words	13.0	38.2	40.0	33.3	27.0	13.8	4.3
Well	4.9	5.9	25.2	46.4	57.1	58.7	41.1
Very Well	-0-	-0-	2.6	7.3	13.5	25.7	54.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Speaking	(n=123)	(n=34)	(n=115)	(n=69)	(n=125)	(n=108)	(n=141)
Not at all	36.6	17.7	1.8	-0-	-0-	-0-	-0-
Just a few words	50.4	55.9	39.1	20.3	4.0	0.9	-0-
More than a few words	13.0	23.5	47.8	53.6	53.6	31.5	7.1
Well	-0-	2.9	10.4	20.3	36.8	52.8	49.6
Very Well	-0-	-0-	0.9	5.8	5.6	14.8	43.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table F-2
Intercorrelation of Selected
Language Proficiency Measures

		Wave I					Wave II							
		MELPU	MELPS	SPUND	IOI	MELPR	MELPU2	MELPS2	SPUND2	IOI2	MELPR2	MELPUJ	MELPSJ	SPUNDJ
W a v e I	MELPU	1.00	.87	.97	.74	.73	.76	.73	.77	.75	.60	.70	.72	.73
	MELPS		1.00	.97	.77	.70	.75	.76	.78	.78	.64	.70	.75	.74
	SPUND			1.00	.78	.75	.78	.77	.80	.79	.65	.72	.76	.76
	IOI				1.00	.63	.75	.74	.77	.86	.64	.69	.73	.73
	MELPR					1.00	.64	.64	.67	.64	.63	.62	.63	.64
W a v e II	MELPU2						1.00	.88	.97	.80	.81	.84	.85	.87
	MELPS2							1.00	.97	.79	.79	.80	.86	.85
	SPUND2								1.00	.82	.83	.84	.88	.88
	IOI2									1.00	.73	.74	.78	.78
	MELPR2										1.00	.77	.74	.78
	MELPUJ											1.00	.90	.98
	MELPSJ												1.00	.98
	SPUNDJ													1.00

NOTE: MELPU=Understanding
MELPS=Speaking
MELPR=Reading
SPUND=Average of speaking and understanding ratings
IOI=Ilyin Oral Interview.
Suffixes: J=English needed for job
2=Wave II

APPENDIX G

CHARACTERISTICS OF TRAINING OCCUPATIONAL AREAS

Table G-1
Percentage Distribution of Classes by Training Occupational Area and Program Type, Spring-Summer, 1978

Training Occupational Area	Program Type					
	Subpart 3 Classes		Non-Subpart 3 Classes		All Programs Classes	
	n	Percent	n	Percent	n	Percent
Distribution	2	40.0	3	60.0	5	100.0
Health	3	75.0	1	25.0	4	100.0
Consumer/Homemaking	-0-	-0-	2	100.0	2	100.0
Office Occupations	10	31.2	22	68.8	32	100.0
Trade/Industrial	14	31.8	30	68.2	44	100.0
All Occupational Areas	29	33.3	58	66.7	87	100.0

Table G-2
Percentage Distribution of Trainees' Occupational Areas by Mother Tongue

Training Occupational Area	Mother Tongue					
	English (n=32)	Total All Non-English Mother Tongues (n=686)	Spanish (n=532)	Chinese (n=84)	Other (n=70)	Total All Mother Tongues (n=718)
Distribution	3.1	6.3	7.9	0.0	1.4	6.1
Health	3.1	3.8	2.1	8.3	11.4	3.8
Consumer/Homemaking	3.1	1.2	0.4	7.1	0.0	1.3
Office Occupations	34.4	39.4	40.0	45.3	27.2	39.1
Trade/Industrial	56.3	49.5	49.6	39.3	60.0	49.7
All Areas	100.0	100.0	100.0	100.0	100.0	100.0

Table G-3

Percentage Distribution of Male and Female Trainees
by Occupational Area

Training Occupational Area	Sex		
	Male (n=286)	Female (n=432)	Both Sexes (n=718)
• *DISTRIBUTION*	*5.5*	*6.4*	*6.1*
Banking & Finance	0.3	0.9	0.7
Export-Import	4.5	1.6	2.8
Distributive Ed./Business Training	0.7	3.9	2.6
• *HEALTH*	*0.3*	*6.0*	*3.8*
Dental Assisting	0.0	2.1	1.3
Home Health Aide/Health Assistant	0.3	3.9	2.5
• *CONSUMER AND HOMEMAKING*	*1.0*	*1.4*	*1.2*
Hospitality Services	0.0	0.7	0.4
Housekeeping	1.0	0.7	0.8
• *OFFICE OCCUPATIONS*	*17.1*	*53.7*	*33.2*
Clerical/Medical Ofc. Skills/Gen. Ofc.	7.7	20.1	15.2
Accounting/Income Tax/Bookkeeping	2.4	12.3	8.4
Keypunch/Data Processing	4.9	2.1	3.2
Bilingual Secretary	0.0	0.5	0.3
Typing	1.4	18.5	11.7
Paralegal	0.7	0.2	0.4
• *TRADE AND INDUSTRIAL*	*76.1*	*32.5*	*49.7*
Air Cond. & Refrig./Electronics-A.C. Repair	11.3	0.0	4.5
Sewing Machine & Repair Mechanic	1.8	0.2	0.8
Auto Body & Fender	1.8	0.0	0.7
Auto Mechanics	7.0	0.7	3.2
Auto Svcs: Brakes, Front End, Tune-up	8.4	0.5	3.6
Building/Construction Trades	3.1	0.2	1.4
Electronics Assembly	4.2	1.6	2.6
Building Trades Foremen	1.8	0.5	1.0
Machine Shop	8.0	1.6	4.2
Welding	10.5	1.2	4.9
Barbering	0.4	0.5	0.4
Cosmetology	0.4	0.5	0.4
Plastics	0.7	1.2	1.0
Culinary Arts/Professional Chef	8.7	2.5	5.0
Small Engine Repair	0.4	0.2	0.3
Apparel Mfg./Sewing Machine Oper.	2.4	20.4	13.2
Upholstering	5.2	0.7	2.5
ALL AREAS	*100.0*	*100.0*	*100.0*

Table G-4
Percentage Distributions of Male and Female Trainees, All Vocational Schools and Bilingual Vocational Training Programs by Occupational Area

TRAINING OCCUPATIONAL AREA	Enrollees in Vocational Schools, October 1976[1]			Trainees in Bilingual Vocational Training Programs Spring-Summer 1978		
	Male (n=3108)	Female (n=2849)	Both Sexes (n=5957)	Male (n=286)	Female (n=432)	Both Sexes (n=718)
Agriculture	2.4	1.4	1.9	-0-	-0-	-0-
Distribution (Sales)	11.5	9.4	10.5	5.5	6.4	6.1
Health	6.0	19.9	12.7	0.3	6.0	3.8
Consumer/Homemaking	0.8	5.9	3.2	1.0	1.4	1.2
Office	14.1	36.5	24.8	17.1	53.7	39.2
Technical	17.8	10.5	14.3	-0-	-0-	-0-
Trade/Industrial	47.4	16.4	32.6	76.1	32.5	49.7
All Areas	100.0	100.0	100.0	100.0	100.0	100.0

Table G-5
Percentage Distributions of Trainees' Occupational Areas, All Vocational Schools and Bilingual Vocational Training Programs, by Sex

Training Occupational Area	Enrollees in Vocational Schools, October 1976[1]			Trainees in Bilingual Vocational Training Programs Spring-Summer 1978		
	Male	Female	n (000)	Male	Female	n (000)
Agriculture	65.2	34.8	115	-0-	-0-	-0-
Distribution (Sales)	57.2	42.8	626	36.4	63.6	44
Health	24.7	75.3	753	3.7	96.3	27
Consumer/Homemaking	13.0	87.0	193	33.3	66.7	9
Office	29.6	70.4	1478	17.4	82.6	281
Technical	64.9	35.1	852	-0-	-0-	-0-
Trade/Industrial	75.9	24.1	1940	60.8	39.2	357
All Areas	52.2	47.8	5957	39.8	60.2	718

[1]U.S. Bureau of the Census, Vocational School Experience: October 1976, Current Population Reports, Series P-20, No. 348, September 1979, p.7.

Table G-6
Percentage Distribution of Trainees' Occupational Areas by Age

Occupational Area	Age			
	Under 25 (n=230)	25-34 (n=217)	35 or Over (n=270)	All Ages (n=717)
Distribution	5.2	5.5	7.4	6.1
Health	4.3	2.3	4.4	3.8
Consumer/Homemaking	0.9	0.0	2.6	1.3
Office Occupations	38.3	46.6	34.1	39.2
Trade/Industrial	51.3	45.6	51.5	49.6
All Areas	100.0	100.0	100.0	100.0

APPENDIX H

ASSISTANCE OBTAINED BY BILINGUAL VOCATIONAL TRAINING PROGRAMS FROM OTHER AGENCIES AND ORGANIZATIONS

Assistance Obtained by Bilingual Vocational Training Programs
from Other Agencies and Organizations

Sources of Assistance \ Types of Assistance Obtained	Adult Basic Education/ GED Instruction	Consultant/Technical Assistance	Counseling	Curriculum/Program Design/Planning	ESL Instruction	Facilities, Equipment, Materials, Supplies	Instructors	Job Placement	Trainee Recruitment/ Referrals	Staff Training	Stipends	Supportive Services	Tutoring	Work Experience Training
Affirmative Action Program								X						
CETA/Employment and Training Offices			X		X		X		X		X	X	X	
Community College/ College/University	X	X		X	X	X	X	X		X		X		
County Human Service Department												X		
Community/National Language Group								X	X			X		
County Personnel/ Placement Office								X						
Day Care Center												X		
Housing Program												X		
Local Education Agency Adult Education	X			X			X			X				
Local Education Agency Other Programs		X		X		X	X		X	X				
Medical/Mental Health Clinics/Hospitals			X						X			X		X
Other Occupational/ Rehabilitation Program		X	X			X	X		X					
Public Service or Civic Organization			X					X	X					
State Education Agency		X		X						X	X			
State Employment Security Agency								X	X		X			
Statewide Bilingual Center										X				
Statewide Fund for Training											X			
Teacher Corps Program						X								
Tribal Council	X										X			X
Unions						X		X						
Veterans Administration Office											X	X		

APPENDIX I

VOCATIONAL INSTRUCTORS' USE OF ENGLISH AND TRAINEES' UNDERSTANDING OF ENGLISH IN THE VOCATIONAL SKILLS CLASS

VOCATIONAL INSTRUCTORS' USE OF ENGLISH AND TRAINEES' UNDERSTANDING OF ENGLISH IN THE VOCATIONAL SKILLS CLASS

As noted in Chapter V and as shown in Table I-1, the vocational instructors spoke English all of the time during the first week in about 21 percent of the classes. In the Subpart 3 programs alone, about one-third of the classes contained instructors who used only English as an instructional medium during the first week. As shown in Table I-2, the trainees' estimates indicate that Subpart 3 instructors were much more likely to speak English all of the time than instructors in other programs.

A correlation analysis reveals that the variable most closely associated with the amount of English used by the instructor in the vocational classroom during the first week of class is the instructor's self-rated proficiency in speaking the trainees' native language (as measured on the MELP scale). The correlation between the amount of time English was used during the first week and the instructor's proficiency in the trainees' native language is r=-.49.

Among other variables associated strongly with the degree of English use by vocational instructors during the first week was, as noted earlier, Subpart 3 funding (r=+.19). The data revealed that Subpart 3 vocational instructors' proficiency in trainees' native languages was lower than was true of instructors in other programs. It was known also that instructors in Subpart 3 programs had fewer years experience instructing limited English-speaking persons than other instructors.

The correlation of the amount of English used by the instructor during the first week with Subpart 3 funding was reduced from .19 to .12, when controlling for the instructors' proficiency in the trainees' native language. The correlation coefficient dropped even lower, to .11, when simultaneously controlling for instructor proficiency in trainees' native language and years experience instructing persons of limited English-speaking ability.

Table I-1

Distribution of Frequency of English
Used by Instructors in Vocational Skills Classes
by Program Type

Frequency of English Use	First Week			Last Week		
	Subpart 3 (n=28)	Non-Subpart 3 (n=58)	All Programs (n=86)	Subpart 3 (n=29)	Non-Subpart 3 (n=58)	All Programs (n=86)
All of the time	32.1	15.5	20.9	32.1	25.9	27.9
Most of the time	3.6	25.9	18.6	46.4	41.4	43.0
About half of the time	28.6	24.1	25.6	14.3	15.5	15.1
Less than half of the time	25.0	12.1	16.3	3.6	13.8	10.5
Very little of the time	7.1	19.0	15.1	3.6	3.4	3.5
None of the time	3.6	3.4	3.5	NA	NA	NA
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Note: NA = Not allowable response

Table I-2
Percentage Distribution of
Amount of Time Vocational Instructor
Speaks English by Program Type

Amount of Time Vocational Instructor Speaks English	Program Type		
	Subpart 3 (n=167)	Non-Subpart 3 (n=549)	All Programs (n=716)
Never	3.0	4.0	3.8
Seldom	12.0	25.7	22.5
Almost Half the Time	16.7	26.2	24.0
Most of the Time	27.0	17.7	19.8
All the Time	41.3	26.4	29.9
Total	100.0	100.0	100.0

Table I-3

Percentage Distribution of Amount of Time Trainees Have Trouble Understanding Vocational Instructors' English by Amount of Time Vocational Instructors Speak English

Amount of Time Trainee Has Trouble Understanding Vocational Instructor's English	Amount of Time Vocational Instructor Speaks English				
	Seldom (n=158)	About half the time (n=172)	Most of the time (n=142)	All the time (n=214)	Total (n=686)
Never	75.3	63.4	54.2	63.6	64.3
Seldom	8.9	18.0	30.3	24.3	20.4
About Half the Time	1.9	8.1	8.5	8.3	6.8
Most of the Time	8.2	5.8	6.3	3.3	5.7
All of the Time	5.7	4.7	0.7	0.5	2.8
TOTAL	100.0	100.0	100.0	100.0	100.0

APPENDIX J

NUMBER AND TYPES OF BILINGUAL, MULTILINGUAL OR NON-ENGLISH VOCATIONAL INSTRUCTIONAL MATERIALS, BY TRAINING OCCUPATIONAL AREA

Number and Types of Bilingual, Multilingual or Non-English Vocational Instructional Materials, by Training Occupational Area

Training Occupational Area	Type of Material				Total All Materials
	Self - Developed		Published		
	Printed	Audio and/or Visual	Printed	Audio and/or Visual	
• *DISTRIBUTION*	4	-0-	5	-0-	9
Banking & Finance	1	-0-	-0-	-0-	1
Export-Import	-0-	-0-	2	-0-	2
Distributive Ed./Business Training	3	-0-	3	-0-	6
• *HEALTH*	2	-0-	-0-	-0-	2
Dental Assisting	-0-	-0-	-0-	-0-	-0-
Home Health Aide/Health Assistant	2	-0-	-0-	-0-	2
• *CONSUMER AND HOMEMAKING*	-0-	1	-0-	-0-	1
Hospitality Services	-0-	-0-	-0-	-0-	-0-
Housekeeping	-0-	1	-0-	-0-	1
• *OFFICE OCCUPATIONS*	10	1	14	-0-	25
Clerical/Medical Ofc. Skills/Gen. Ofc.	6	-0-	13	-0-	19
Accounting/Income Tax/Bookkeeping	1	-0-	-0-	-0-	1
Keypunch/Data Processing	-0-	-0-	1	-0-	1
Bilingual Secretary	-0-	-0-	-0-	-0-	-0-
Typing	3	1	-0-	-0-	4
Paralegal	-0-	-0-	-0-	-0-	-0-
• *TRADE AND INDUSTRIAL*	16	2	5	8	31
Air Cond. & Refrig./Electronics-A.C. Repair	-0-	1	-0-	-0-	1
Sewing Machine Repair Mechanic	1	-0-	-0-	-0-	1
Auto Body & Fender	-0-	-0-	-0-	-0-	-0-
Auto Mechanics	-0-	-0-	2	5	7
Auto Svcs: Brakes, Front End, Tune-Up	-0-	-0-	-0-	-0-	-0-
Building/Construction Trades	-0-	-0-	-0-	-0-	-0-
Electronics Assembly	1	-0-	-0-	1	2
Building Trades Foremen	3	-0-	-0-	-0-	3
Machine Shop	4	-0-	-0-	-0-	4
Welding	-0-	-0-	-0-	-0-	-0-
Barbering	-0-	-0-	-0-	-0-	-0-
Cosmetology	-0-	1	1	1	3
Plastics	-0-	-0-	1	1	2
Culinary Arts/Professional Chef	2	-0-	-0-	-0-	2
Small Engine Repair	-0-	-0-	-0-	-0-	-0-
Apparel Mfg./Sewing Machine Operator	3	-0-	1	-0-	4
Upholstering	2	-0-	-0-	-0-	2
TOTAL - ALL OCCUPATIONS	32	4	24	8	68

APPENDIX K

EMPHASIS PLACED ON TEACHING VARIOUS TYPES OF ENGLISH LANGUAGE SKILLS BY VOCATIONAL AND ESL INSTRUCTORS

Table K-1

Percentage of Vocational and ESL Instructors by Degree of Emphasis Placed on Teaching Various Types of English Language Skills

English Language Skill	Type of Instructor and Degree of Emphasis								Total	
	Quite a Bit		Some		A Little		None		Voc.	ESL
	Voc.	ESL	Voc.	ESL	Voc.	ESL	Voc.	ESL	(n=110)	(n=25)
Consumer/Survival Skills	N.A.	36.0	N.A.	56.0	N.A.	4.0	N.A.	4.0	N.A.	100.0
Communicating With the Public, In Person	50.0	68.0	26.4	16.0	10.9	16.0	11.8	-0-	99.1	100.0
Telephone Contacts	36.4	40.0	26.4	12.0	18.2	36.0	18.2	8.0	99.2	96.0
Communicating With Supervisors	60.0	52.0	24.5	28.0	9.1	12.0	5.5	8.0	99.1	100.0
Communicating With Fellow Employees	47.3	52.0	33.6	44.0	8.2	-0-	10.0	4.0	99.1	100.0
Reading Instructions, Directions	70.9	48.0	16.4	40.0	6.4	8.0	4.5	-0-	98.2	96.0
Using Manuals As A Reference	60.0	40.0	20.9	24.0	8.2	20.0	10.0	16.0	99.1	100.0
Reading Diagrams	45.5	32.0	20.9	24.0	13.6	24.0	18.2	20.0	98.2	100.0
Filling Out Forms	44.5	48.0	29.1	36.0	8.2	8.0	17.3	8.0	99.1	100.0
Writing Simple Statements	30.0	56.0	30.0	32.0	19.1	8.0	19.1	4.0	98.2	100.0
Writing Narratives/ Descriptive Passages	20.0	28.0	12.7	28.0	29.1	20.0	35.5	24.0	97.3	100.0

Note: N.A. = Not Applicable. Percentages do not always total 100.0 because of non-response.

Table K-2

Percentage of Vocational and ESL Instructors by Occupational Area and Degree of Emphasis Placed on Teaching Various Types of English Language Skills (weighted by number of classes taught by each instructor)

English Language Skill	Occupational Area and Degree of Emphasis																											
	Distribution					Health					Commerce/Housekeeping					Office Occupations					Trade/Industrial					All Occupations				
	Quite a Bit	Some	A Little	None	Total	Quite a Bit	Some	A Little	None	Total	Quite a Bit	Some	A Little	None	Total	Quite a Bit	Some	A Little	None	Total	Quite a Bit	Some	A Little	None	Total	Quite a Bit	Some	A Little	None	Total
COMMUNICATING WITH THE PUBLIC IN PERSON																												
Voc. Instructors	61.6	18.2	-0-	18.2	100.0	83.3	16.7	-0-	-0-	100.0	50.0	-0-	50.0	-0-	100.0	68.8	19.5	17.1	14.6	100.0	64.0	14.0	8.0	14.0	100.0	58.0	26.4	10.9	11.8	99.1
ESL Instructors	100.0	-0-	-0-	-0-	100.0	100.0	-0-	-0-	-0-	100.0	-0-	-0-	-0-	-0-	-0-	87.8	9.7	2.4	-0-	100.0	76.5	5.9	17.6	-0-	100.0	84.0	6.5	9.7	-0-	100.0
TELEPHONE CONTACTS																												
Voc. Instructors	54.5	27.3	-0-	18.2	100.0	33.3	33.3	16.7	16.7	100.0	-0-	50.0	-0-	50.0	100.0	41.4	29.3	17.1	12.2	100.0	50.0	22.0	24.0	22.0	98.0	56.0	26.4	10.2	10.2	99.2
ESL Instructors	100.0	-0-	-0-	-0-	100.0	33.3	-0-	66.7	-0-	100.0	-0-	-0-	-0-	-0-	-0-	73.9	11.0	8.7	6.4	100.0	52.9	5.9	29.4	5.9	94.1	65.2	8.7	19.6	4.3	97.8
COMMUNICATING WITH SUPERVISORS																												
Voc. Instructors	63.6	18.2	9.1	9.1	100.0	50.0	33.3	16.7	-0-	100.0	50.0	-0-	50.0	-0-	100.0	48.8	26.8	14.6	9.8	100.0	70.0	24.0	2.0	2.0	98.0	60.0	26.5	9.1	5.5	99.1
ESL Instructors	100.0	-0-	-0-	-0-	100.0	33.3	66.7	-0-	-0-	100.0	-0-	-0-	-0-	-0-	-0-	26.1	17.4	52.2	4.3	100.0	47.1	17.6	35.3	-0-	100.0	39.1	19.6	19.1	2.2	100.0
COMMUNICATING WITH FELLOW EMPLOYEES																												
Voc. Instructors	9.1	45.4	18.2	27.3	100.0	66.7	33.3	-0-	-0-	100.0	50.0	-0-	-0-	50.0	100.0	61.9	11.9	14.6	9.8	100.0	56.0	14.0	2.0	6.0	98.0	47.3	13.6	9.2	10.0	99.1
ESL Instructors	33.3	66.7	-0-	-0-	100.0	33.3	66.7	-0-	-0-	100.0	-0-	-0-	-0-	-0-	-0-	17.4	30.4	43.5	8.7	100.0	41.2	29.4	29.4	-0-	100.0	28.1	34.8	32.6	4.5	100.0
READING INSTRUCTIONS, DIRECTIONS																												
Voc. Instructors	90.9	-0-	-0-	9.1	100.0	66.6	16.7	16.7	-0-	100.0	50.0	-0-	50.0	-0-	100.0	82.9	9.8	4.9	2.4	100.0	50.0	26.0	6.0	6.0	96.0	70.9	16.4	6.4	4.5	98.2
ESL Instructors	-0-	100.0	-0-	-0-	100.0	33.3	33.3	-0-	33.4	100.0	-0-	-0-	-0-	-0-	-0-	21.7	69.6	8.7	-0-	100.0	41.2	58.8	-0-	-0-	100.0	28.1	65.2	6.3	-0-	97.8
USING NUMBERS AS A REFERENCE																												
Voc. Instructors	72.7	9.1	18.2	-0-	100.0	50.0	33.1	16.7	-0-	100.0	50.0	-0--	-0-	50.0	100.0	60.1	14.6	7.1	9.8	100.0	52.0	28.0	6.0	12.0	98.0	60.0	20.9	8.2	10.0	99.1
ESL Instructors	66.7	-0-	33.3	-0-	100.0	100.0	-0-	-0-	-0-	100.0	-0-	-0-	-0-	-0-	-0-	21.7	8.7	17.4	52.2	100.0	29.4	29.4	5.9	35.3	100.0	32.6	13.2	13.1	39.1	100.0
READING DIAGRAMS																												
Voc. Instructors	45.4	18.2	9.1	27.3	100.0	16.7	50.0	33.1	-0-	100.0	-0-	50.0	-0-	50.0	100.0	41.5	7.3	26.4	26.4	97.6	54.0	26.0	6.0	12.0	98.0	43.5	20.9	11.6	18.2	98.2
ESL Instructors	-0-	66.7	-0-	33.3	100.0	66.7	33.3	-0-	-0-	100.0	-0-	-0-	-0-	-0-	-0-	8.7	30.4	52.2	8.7	100.0	35.3	11.8	41.1	11.8	100.0	21.7	26.1	41.3	10.9	100.0
FILLING OUT FORMS																												
Voc. Instructors	54.5	36.4	-0-	9.1	100.0	16.7	50.0	33.1	-0-	100.0	50.0	-0-	-0-	50.0	100.0	58.5	19.5	4.9	17.1	100.0	54.0	36.0	10.0	20.0	98.0	44.5	29.1	8.2	17.1	99.1
ESL Instructors	100.0	-0-	-0-	-0-	100.0	-0-	33.3	33.3	-0-	66.6	-0-	-0-	-0-	-0-	-0-	30.4	17.4	43.5	8.7	100.0	23.5	47.1	29.4	-0-	100.0	30.4	28.3	34.8	6.1	97.8
WRITING SIMPLE SENTENCES																												
Voc. Instructors	54.5	27.3	9.1	9.1	100.0	16.7	33.3	33.3	16.7	100.0	-0-	50.0	50.0	-0-	100.0	79.0	14.6	19.5	4.9	100.0	28.0	36.0	18.0	14.0	96.0	51.0	30.0	19.1	19.1	98.2
ESL Instructors	100.0	-0-	-0-	-0-	100.0	66.7	33.3	-0-	-0-	100.0	-0-	-0-	-0-	-0-	-0-	47.9	6.3	43.5	6.3	100.0	23.5	41.2	35.3	-0-	100.0	41.3	19.5	34.8	2.2	100.0
WRITING PARAGRAPHS/SCRIPTED PASSAGES																												
Voc. Instructors	36.4	-0-	27.3	36.4	100.0	-0-	16.7	33.1	50.0	100.0	-0-	-0-	50.0	50.0	100.0	26.8	36.6	31.7	22.0	100.0	36.0	36.0	26.0	44.0	98.0	30.0	32.7	29.1	39.5	97.3
ESL Instructors	100.0	-0-	-0-	-0-	100.0	33.3	33.3	33.4	-0-	100.0	-0-	-0-	-0-	-0-	-0-	17.4	17.4	8.7	56.5	100.0	11.8	29.4	17.6	41.2	100.0	21.7	21.7	13.1	43.5	100.0

NOTE: Percentages do not always total 100.0 because of non-response.
ESL data based on responses of 21 ESL instructors weighted as follows:

Occupational Area	No. of Voc. Instructors	No. of Classes Represented by ESL Instructors
Distribution	11	3
Health	6	3
Commerce/Housekeeping	2	-0-
Office Occupations	41	25
Trade/Industrial	50	17
TOTAL	110	46

APPENDIX L

VARIABLES ASSOCIATED WITH PRE-POST CHANGES IN TRAINEE LABOR FORCE STATUS

VARIABLES ASSOCIATED WITH PRE-POST CHANGES IN TRAINEE LABOR FORCE STATUS

As noted in Chapter VII, a large number of variables were associated significantly with pre-post change in the average unemployment rate. The principal correlates with pre-post unemployment rate change were (negative relationship is favorable):

- pre-program average unemployment rate: r=-.73
- number of unemployment spells in pre-program period: r=-.51
- number of different English language skills taught by ESL instructors: r=-.28
- ESL and vocational instructor coordinated instruction: r=-.25
- program operated by skills center or regional occupation program: r=-.21
- trainee planned to get a job after training: r=-.14
- trainee stipends provided during training: r=-.14
- total hours of vocational training received: r=-.13
- Subpart 3 funding: r=-.12
- post-program job matched to training occupational area r=-.11
- number of weeks to find first job after leaving program: r=+.18
- trainee completed prior vocational training course: r=+.22

The correlation of change in the average unemployment rate with Subpart 3 funding (r=-.12) is reduced to -.09 when controlling for pre-program unemployment rate, indicating that about three-fourths of the correlation remains after removing the effects of the relatively low pre-program unemployment rates of Subpart 3 trainees.

TABLE L-1

Mean Pre-Program, Post-Program and Change in Average Labor Force Participation Rate Selected Trainee Subgroups

Subgroup Characteristics	Period		Pre-Post Change (in percentage points)
	Pre-Program (in percent)	Post-Program (in percent)	
All Trainees (n=466)	59.3	73.9	+14.6
Program Type			
Subpart 3 (n=113)	61.6	76.6	+15.0
Non-Subpart 3 (n=353)	58.5	73.1	+14.6
Sex			
Male (n=174)	76.0	86.1	+10.1
Female (n=292)	49.3	66.7	+17.4
Age[1]			
Under 25 (n=153)	50.6	74.2	+23.6
25-34 (n=139)	65.6	75.7	+10.1
35 & over (n=173)	61.8	72.1	+10.3
Mother Tongue			
Spanish (n=341)	58.2	71.4	+13.2
Chinese (n=64)	70.4	93.4	+23.0
Other (n=47)	59.3	71.4	+12.1
Country of Birth[2]			
United States (n=90)	56.0	69.1	+13.1
Mexico (n=64)	51.3	80.6	+29.3
Cuba (n=135)	62.0	64.9	+ 2.9
Puerto Rico (n=27)	51.4	83.1	+31.7
Central America (n=26)	52.7	68.9	+16.2
Other Spanish (n=43)	66.1	75.4	+ 9.3
China-Hong Kong (n=57)	71.4	93.9	+22.5
Years Lived in U.S.[1]			
0- 5 (n=169)	56.0	80.4	+24.4
6-15 (n=142)	62.9	69.6	+ 6.7
16 & over (n=62)	64.1	72.9	+ 8.8
Years of Education (Total)[1]			
0- 6 (n=68)	50.2	68.0	+17.8
7- 9 (n=94)	60.7	71.7	+11.0
10-11 (n=92)	50.0	71.6	+21.6
12 & over (n=212)	65.6	77.8	+12.2
Years of English Education			
0 (n=244)	57.9	74.2	+16.3
1- 2 (n=54)	58.8	72.0	+13.2
3- 4 (n=30)	76.1	84.7	+ 8.6
5- 6 (n=16)	53.4	66.0	+12.6
7- 9 (n=33)	61.0	68.4	+ 7.4
10-11 (n=37)	55.8	69.9	+14.1
12 & over (n=48)	58.6	76.6	+18.0
MELP Speaking Rating (Wave I)			
Not At All (n=35)	55.9	69.4	+13.5
Just a Few Words (n=65)	53.2	70.6	+17.4
More Than a Few Words (n=146)	56.8	76.7	+19.9
Well (n=139)	64.9	74.6	+ 9.7
Very Well (n=59)	63.1	72.1	+9.0
Training Occupational Area			
Distributive (n=37)	67.3	78.7	+11.4
Health (n=15)	53.8	74.2	+20.4
Consumer and Homemaking (n=7)	65.4	85.7	+20.3
Office (n=183)	54.8	71.3	+16.5
Trade and Industrial (n=224)	61.8	74.9	+13.1
Total Hours of Training			
0- 120 (n=121)	56.0	67.5	+10.6
121- 240 (n=101)	59.5	77.0	+18.2
241- 360 (n=91)	57.0	68.2	+11.2
361- 640 (n=90)	58.5	83.5	+26.8
641-1820 (n=56)	65.0	69.8	+ 4.8
Pre-Program Average Labor Force Participation			
0% (n=126)	0.0	49.6	+49.6
1-50% (n=65)	48.2	73.4	+25.2
51-99% (n=73)	79.2	81.7	+ 2.5
100% (n=202)	100.0	86.4	+13.6

[1] Pre-program status.

[2] Trainees born in Puerto Rico are counted as foreign born because Spanish is the usual language. Trainees did not always differentiate People's Republic of China (mainland China) from Republic of China (Taiwan).

APPENDIX M

FORMER TRAINEES' SATISFACTION WITH POST-PROGRAM JOBS AND WITH BILINGUAL VOCATIONAL TRAINING

Table M-1
Degree of Satisfaction of Former Trainees with Various Aspects of Their Most Recent Post-Program Job and Occupation, Spring-Summer 1979, by Program Type
(percentage distribution)

Satisfaction with:	Program Type											
	Subpart 3				Non-Subpart 3				All Programs			
	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied
		(n=96)				(n=269)				(n=365)		
Job as a whole	22.9	55.2	19.8	2.1	27.9	57.2	12.7	2.2	26.6	56.7	14.5	2.2
		(n=95)				(n=266)				(n=361)		
Pay and fringe benefits	17.9	52.6	24.2	5.3	24.1	50.8	22.6	2.5	22.4	51.3	23.0	3.3
		(n=95)				(n=261)				(n=356)		
Security and permanence	21.1	60.0	14.7	4.2	28.7	46.7	20.8	3.8	26.7	50.3	19.1	3.9
		(n=96)				(n=272)				(n=368)		
Working conditions	25.0	64.6	4.3	1.0	30.9	52.2	15.4	1.5	29.3	55.4	13.9	1.4
		(n=92)				(n=271)				(n=363)		
Supervisors	25.0	69.6	34.0	1.1	36.2	55.4	8.1	0.3	33.3	59.0	7.2	0.5
		(n=88)				(n=258)				(n=346)		
Opportunity for advancement with employer	11.4	45.5	28.0	9.1	19.4	43.0	29.8	7.8	17.3	43.7	30.9	8.1
		(n=93)				(n=260)				(n=353)		
Opportunity to use past training and education	23.7	43.0	28.0	5.3	26.5	43.5	23.5	6.5	25.8	43.3	24.7	6.2
		(n=93)				(n=263)				(n=356)		
Opportunity for developing new skills	22.6	45.2	28.0	4.2	27.8	46.8	18.2	7.2	26.4	46.3	20.8	6.5
		(n=92)				(n=261)				(n=353)		
How work utilizes abilities	22.8	55.4	18.5	3.3	28.7	52.1	15.3	3.9	27.2	53.0	16.1	3.7
		(n=94)				(n=268)				(n=362)		
How interesting work is	23.4	50.0	22.3	4.3	34.7	45.1	16.5	3.7	31.7	46.4	18.0	3.9
		(n=94)				(n=270)				(n=364)		
Usefulness and importance of job	27.7	57.4	12.8	2.1	32.6	56.3	10.7	0.4	31.3	56.6	11.3	0.8
		(n=89)				(n=261)				(n=350)		
Opportunities for advancement in this line of work	14.6	47.2	29.2	9.0	23.0	42.9	28.7	5.4	20.9	44.0	28.9	6.2
		(n=91)				(n=262)				(n=353)		
Respect received from family/friend by being in this line of work	29.7	61.5	8.8	-0-	43.5	46.6	8.4	1.5	40.0	50.4	8.5	1.1

Table M-2
Degree of Satisfaction of Former Trainees with
Various Aspects of Bilingual Vocational Training
Spring-Summer 1979, by
Program Type
(percentage distribution)

Satisfaction with:	Program Type											
	Subpart 3				Non-Subpart 3				All Programs			
	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied	Very Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Very Dissatisfied
Ability and knowledge of instructors	56.0	38.8 (n=116)	4.3	0.9	62.8	31.8 (n=352)	4.0	1.4	61.1	33.5 (n=468)	4.1	1.3
Way the instructor taught the skills	42.6	51.3 (n=115)	4.3	1.8	61.3	30.4 (n=349)	5.4	2.9	56.6	35.6 (n=464)	5.2	2.6
Tools, equipment, etc.	38.7	56.6 (n=106)	4.7	-0-	47.1	41.9 (n=329)	7.9	3.1	45.1	45.5 (n=435)	7.1	2.3
Instructional materials (written & audio/visual)	29.2	63.2 (n=106)	7.6	-0-	44.7	44.1 (n=311)	8.4	2.8	40.8	48.9 (n=417)	8.1	2.2
Counseling	29.1	61.2 (n=103)	5.8	3.9	50.8	35.6 (n=315)	8.8	4.8	45.5	41.9 (n=418)	8.1	4.5
Job placement	35.0	30.0 (n=100)	24.0	11.0	33.5	33.8 (n=260)	15.4	17.3	33.9	32.8 (n=360)	17.8	15.5
Amount of skills training received	30.4	57.4 (n=115)	11.3	0.9	50.4	35.5 (n=349)	11.7	2.4	45.6	40.9 (n=464)	11.6	1.9
Preparation for a job related to training	32.1	58.9 (n=112)	7.2	1.8	45.9	39.6 (n=331)	13.0	1.5	42.4	44.5 (n=443)	11.5	1.6

Table M-3

Degree of Agreement of Former Trainees with Various Statements Regarding Their Most Recent Post-Program Job and Their Bilingual Vocational Training, Spring-Summer 1979, by Program Type
(percentage distribution)

Statement	Favorable (+) Unfavorable (-)	Program Type and Agreement/Disagreement											
		Subpart 3				Non-Subpart 3				All Programs			
		Strongly Agree	Some What Agree	Some What Dis-Agree	Strongly Disagree	Strongly Agree	Some-What Agree	Some What Dis-Agree	Strongly Disagree	Strongly Agree	Some-What Agree	Some What Dis-Agree	Strongly Disagree
Training was a wise choice	(+)	62.9	(n=97) 33.0	1.0	3.1	78.5	(n=270) 18.1	2.7	0.7	74.4	(n=367) 22.1	2.2	1.3
Would have liked more training before working	(-)	26.4	(n=91) 33.0	26.3	14.3	38.5	(n=262) 24.0	21.0	16.5	35.4	(n=353) 26.3	22.4	15.9
Able to apply most of what was learned in training	(+)	33.7	(n=95) 29.5	18.9	17.9	38.9	(n=270) 27.4	13.0	20.7	37.6	(n=365) 27.9	14.5	20.0
Training differs from way it's done on job	(-)	25.0	(n=92) 34.8	22.8	17.4	29.9	(n=251) 24.3	18.3	27.5	28.6	(n=343) 27.1	19.5	24.8
Most of what is done on job was learned in training	(+)	23.2	(n=95) 31.6	20.0	25.2	29.2	(n=257) 22.6	22.1	26.1	27.5	(n=352) 25.0	21.6	25.9
Could have got job without training	(-)	29.0	(n=93) 17.2	24.8	29.0	42.1	(n=252) 13.1	16.7	28.1	38.6	(n=345) 14.2	18.8	28.4
Trained with tools or equipment not used on job	(-)	28.7	(n=94) 19.1	26.6	25.6	30.1	(n=249) 17.3	21.7	30.9	29.7	(n=343) 17.8	23.0	29.5
Would have liked more English for this job	(-)	55.8	(n=95) 21.1	15.7	7.4	43.5	(n=262) 22.9	14.5	19.1	46.8	(n=357) 22.4	14.8	16.0

APPENDIX N

CHANGES IN TRAINEE ENGLISH LANGUAGE PROFICIENCY BETWEEN WAVE I AND WAVE II INTERVIEWS

CHANGES IN TRAINEE ENGLISH LANGUAGE PROFICIENCY BETWEEN WAVE I AND WAVE II INTERVIEWS

This appendix presents data on changes in trainees' English language proficiency between the Wave I interview (while enrolled in training) and the Wave II interview (8 to 11 months after leaving training). The Wave I proficiency scores were obtained at a time when the trainees had been enrolled in the programs for varying lengths of time, and in no way can these scores be interpreted as representing pre-program English language proficiency. If it is assumed that English language proficiency rises throughout attendance in a bilingual vocational training class, then the Wave I (during program) scores shown would be higher than those same scores at entry and lower than the scores upon completion of the class.

Changes in Trainees' English Language Proficiency

Language Measure, Program Type, and Mother Tongue	Period		Change
	During Program	Post-Program	
MELP UNDERSTANDING RATING (n=514)	3.49	3.77	+ .28
Program Type			
Subpart 3 (n=118)	3.46	3.71	+ .25
Non-Subpart 3 (n=396)	3.50	3.79	+ .29
Mother Tongue			
English (n=22)	4.73	4.86	+ .13
Spanish (n=382)	3.47	3.79	+ .32
Chinese (n=60)	2.95	3.15	+ .20
Other (n=50)	3.76	3.96	+ .20
MELP SPEAKING RATING (n=512)	3.20	3.55	+ .35
Program Type			
Subpart 3 (n=117)	3.20	3.58	+ .38
Non-Subpart 3 (n=395)	3.21	3.54	+ .33
Mother Tongue			
English (n=22)	4.64	4.59	- .05
Spanish (n=380)	3.14	3.52	+ .38
Chinese (n=60)	2.70	3.02	+ .32
Other (n=50)	3.64	3.96	+ .32
MELP READING RATING (n=368)	3.75	4.08	+ .33
Program Type			
Subpart 3 (n=83)	3.66	3.92	+ .26
Non-Subpart 3 (n=285)	3.78	4.12	+ .34
Mother Tongue			
English (n=21)	4.57	4.76	+ .19
Spanish (n=286)	3.70	4.09	+ .39
Chinese (n=21)	3.29	3.38	+ .09
Other (n=40)	3.93	3.98	+ .05
ILYIN ORAL INTERVIEW SCORE[1] Program Type (n=454)	39.7	47.7	+ 8.0
Subpart 3 (n=99)	41.5	44.2	+ 2.7
Non-Subpart 3 (n=355)	39.1	46.6	+ 7.5
Mother Tongue			
English (n=18)	78.4	90.1	+11.7
Spanish (n=344)	38.8	45.4	+ 6.6
Chinese (n=55)	31.6	34.0	+ 7.8
Other (n=37)	40.9	48.7	+ 8.7
ILYIN ORAL INTERVIEW SCORE[2] Program Type (n=353)	51.0	59.3	+ 8.3
Subpart 3 (n=83)	49.5	52.8	+ 3.3
Non-Subpart 3 (n=270)	51.5	61.3	+ 9.8
Mother Tongue			
English (n=18)	78.4	90.1	+11.7
Spanish (n=264)	50.5	59.2	+ 8.7
Chinese (n=38)	45.7	49.2	+ 3.5
Other (n=33)	45.9	54.6	+ 8.7

[1] Persons who did not pass either the screen or orientation were arbitrarily assigned a score of 0 for this tabulation.

[2] Excludes persons who did not pass screen or orientation in Wave I.

APPENDIX O

OCCUPATIONS OF FORMER TRAINEES

Table O-1

Percent of Trainees Whose Current/Most Recent Job and First Job after Training Matched Their Training Occupation, by Program Type and Training Occupational Area

Training Occupational Area	Trainees with Post-Program Jobs		Percent Matched, Current/Most Recent Job			Percent Matched, First Job After Leaving Training		
	Subpart 3	Non-Subpart 3	Subpart 3	Non-Subpart 3	Both Types	Subpart 3	Non-Subpart 3	Both Types
• *DISTRIBUTION*	*4*	*24*	*-0-*	*25.0*	*21.4*	*-0-*	*25.0*	*21.4*
Banking & Finance	4	--	-0-	--	-0-	-0-	--	-0-
Export-Import	--	16	--	6.3	6.3	--	6.3	6.3
Distributive Ed./Business Training	--	8	--	62.5	62.5	--	62.5	62.5
• *HEALTH*	*9*	*3*	*44.4*	*100.0*	*58.3*	*44.4*	*100.0*	*58.3*
Dental Assisting	2	--	100.0	--	100.0	100.0	--	100.0
Home Health Aide/Health Assistant	7	3	28.6	100.0	50.0	28.6	100.0	50.0
• *CONSUMER AND HOMEMAKING*	--	*7*	--	*42.9*	*42.9*	--	*57.1*	*57.1*
Hospitality Services	--	2	--	-0-	-0-	--	-0-	-0-
Housekeeping	--	5	--	60.0	60.0	--	80.0	80.0
• *OFFICE OCCUPATIONS*	*33*	*108*	*24.2*	*22.2*	*22.7*	*24.2*	*23.1*	*23.4*
Clerical/Medical Ofc. Skills/Gen. Ofc.	18	40	38.9	30.0	32.8	38.9	32.5	34.5
Accounting/Income Tax/Bookkeeping	10	19	10.0	52.6	37.9	10.0	52.6	37.9
Keypunch/Data Processing	3	12	-0-	-0-	-0-	-0-	-0-	-0-
Bilingual Secretary	--	2	--	50.0	50.0	--	50.0	50.0
Typing	--	35	--	2.9	2.9	--	2.9	2.9
Paralegal	2	--	-0-	--	-0-	-0-	--	-0-
• *TRADE AND INDUSTRIAL*	*51*	*134*	*31.4*	*45.5*	*41.6*	*29.4*	*50.0*	*44.3*
Air Cond. & Refrig./Electronics-A.C. Repair	--	9	--	11.1	11.1	--	22.2	22.2
Sewing Machine Repair Mechanic	--	4	--	75.0	75.0	--	75.0	75.0
Auto Body & Fender	--	2	--	-0-	-0-	--	50.0	50.0
Auto Mechanics	9	2	11.1	50.0	18.2	22.2	50.0	27.3
Auto Svcs: Brakes, Front End, Tune-Up	--	17	--	35.3	35.3	--	41.2	41.2
Building/Construction Trades	5	1	20.0	-0-	16.7	20.0	-0-	16.7
Electronics Assembly	--	10	--	70.0	70.0	--	70.0	70.0
Building Trades Foremen	7	--	57.1	--	57.1	42.9	--	42.9
Machine Shop	4	17	25.0	29.4	28.6	25.0	23.5	23.8
Welding	4	18	25.0	44.4	40.9	25.0	55.6	50.0
Cosmetology	--	1	--	-0-	-0-	--	-0-	-0-
Plastics	5	--	20.0	--	20.0	-0-	--	-0-
Culinary Arts/Professional Chef	17	--	41.2	--	41.2	41.2	--	41.2
Small Engine Repair	--	1	--	-0-	-0-	--	-0-	-0-
Apparel Mfg./Sewing Machine Operator	--	47	--	63.8	63.8	--	68.1	68.1
Upholstering	--	5	--	-0-	-0-	--	-0-	-0-
Paralegal	2	--	-0-	--	-0-	-0-	--	-0-
TOTAL - ALL OCCUPATIONS	*97*	*276*	*28.9*	*35.1*	*33.5*	*27.8*	*38.0*	*35.4*

NOTE: -- = no training classes in this occupational area for program type.

Table 0-2
Listing of Post-Program Occupations
of Former Bilingual Vocational Trainees,
Spring-Summer 1978 to Spring-Summer 1979

PROFESSIONAL, TECHNICAL, MANAGERIAL

- Medicine/Health
  - Dental Assistants
- Education
  - Child care workers
  - Early child education
  - Teaching assistants, aides
  - Fire hose surveyor
- Administrative Specializations
  - Accountants
  - Office managers
  - Restaurant owners
- Other
  - Musicians
  - Piano teacher
  - Youth Counselor

CLERICAL AND SALES

- Clerical
  - Office work
  - Secretaries
  - Typists
  - File clerks
  - Clerk typist
  - Price clerks
  - Customer service (banking)
  - Bookkeepers
  - Cashiers
  - Tellers
  - Keypunch operator
  - Computer operator
  - Bank clerk
  - Proof machine operator
  - Statistics clerk
  - Accounting clerk
  - Shipping and receiving clerks
  - Stock clerks
  - Telephone operators
  - Receptionists
  - Order clerk
  - Reservation clerk (travel agency)
  - Library aids
  - Medical records clerk
- Sales
  - Salesperson - apparel
  - Salesperson - shoes
  - Salesperson - housefurnishings
  - Salesperson - plumbing supplies, machinist supplies
  - Salesperson - household appliances, electrical machinery equipment
- Sales
  - Store clerk
  - Sales clerk
  - Models, demonstrators
  - Department manager (store)

SERVICE

- Food and Beverage Preparation and Service Occupations
  - Waiters, waitresses
  - Pastry worker
  - Assistant cook
  - specialty cook
  - Cafeteria cook
  - Cook helper, salad maker
  - Kitchen workers
  - Steward
- Domestic, Lodging Services
  - Housekeepers
  - Maids
  - Babysitters
- Barbering, Cosmetology, and Related Service Occupations
  - Manicurists
  - Cosmetologists
  - Masseurs
- Miscellaneous Personal Services
  - Home attendant
  - Health assistant
- Other
  - Checkroom attendant
  - Pressing
  - Security guards
  - Porters, janitors
  - Exterminators

FARMING, FISHERY, FORESTRY

- Plant Farming
  - Fruit and nut farming
  - Groundskeeping
- Miscellaneous Farming
  - General Farming, Farmworkers
- Agricultural Services
  - Cotton ginning

PROCESSING

- Processing of Metal
  - Chromeplating
- Ore refining
  - Sheet metal
  - Foundry inspector
- Processing of Food, Tobacco, and Related Products
  - Cannery worker
- Processing of Chemicals, Plastics, Synthetics and Related Products
  - Injection Mold Observer (machine operator)
  - Inspector - plastics
- Processing of Leather, Textiles, and Related Products
  - Carpet cutter
- Processing, not elsewhere classified
  - Car washer
  - Factory work

MACHINE TRADES

- Metal Machining
  - Machinists, machine operator
- Metalworking
  - Foreman (windows, doors)
- Mechanics and Machinery Repair Persons
  - Auto mechanics
  - Motor tester (auto manufacturing)
  - Air conditioning and refrigeration repair person
  - Repair Mechanic - sewing machines, appliances
- Paperworking
  - Binder
- Wood Machining
  - Furniture carpenters
  - Sawing occupations
- Machine Trades Occupations
  - Bench presser
  - Masking (electronics)

BENCH WORK

- Textile, Leather
  - Upholsterers
  - Hand sewers
  - Leather cutter
  - Tailors, dressmaker
  - Sewing machine operators (garment and nongarment)
  - Footwear fabrication, repair
  - Supervisor, sewing machine operators
- Electronics Assembly, Repair
  - Electronics assembler
  - Foreman, electronics
- Other Bench Work
  - Jewelry polisher
  - Grinding (metal)
  - Medical equipment fabrication, repair
  - Paint touch-up
  - Tire repair
  - Furniture maker, assembler
  - Wood finisher

STRUCTURAL

- Welding
  - Welders
- Metal Fabricating, not elsewhere classified
  - Jig fitter - assembels parts for mechanics manufacturers
  - Assembly line worker-auto parts
  - Auto body repair
- Construction, not elsewhere classified
  - Carpenters
  - Brick and stone masons
  - Plumbers, pipe fitters
  - Construction work
  - Fence erector
- Electrical Assembling, Installing, Repairing
  - Installation, repair - heaters
  - Elevator repair person
  - Electrical technician
- Other Structural
  - Plasterers
  - Cement, concrete finishing
  - Maintenance man

MISCELLANEOUS

- Materials Handling
  - Packaging occupations
  - Warehouse foreman
- Motor Freight, Transportation
  - Concrete - mixing - truck driver
  - Truck drivers
  - Freight forwarder
  - Air transportation occupations
  - Passenger transportation occupations
  - Gas station attendant
- Other Miscellaneous
  - Blasting
  - Sign Painter
  - Hand compositors, typesetters - correction person

APPENDIX P

TRAINEES' ENGLISH NEEDS FOR POST-PROGRAM JOBS

Table P-1
Language Usually Spoken by Former Trainees in
Various Domains, Spring-Summer 1979

Language	Language Domains		
	Usual Language (n=517)	Usual Language With Job Supervisor (n=366)	Usual Language With Fellow Employees (n=369)
English	17.0	59.9	43.1
Spanish	58.4	25.4	32.5
Chinese	11.6	6.8	7.1
Vietnamese	1.0	-0-	-0-
Navajo	1.0	0.5	0.8
Lakota	0.6	-0-	-0-
Other Languages	1.9	0.3	-0-
English and Spanish	6.7	6.0	12.7
English and Chinese	-0-	0.3	1.4
English and Vietnamese	0.2	0.3	0.3
English and Navajo	0.6	0.5	0.8
English and Lakota	0.6	-0-	0.8
Two Other Languages	0.4	-0-	0.5
TOTAL	100.0	100.0	100.0

Table I-4

Percentage of Trainees Who Need to Use English On Their Most Recent Job, by Post-Program Occupations

English Language Skill and Amount Trainees have to Use Skill on Most Recent Job	Most Recent Post-Program Occupations									
	Professional Technical	Clerical and Sales	Service	Farming	Processing	Machine Trade	Bench Work	Structural	Miscellaneous	All Occupations
COMMUNICATING WITH THE PUBLIC IN PERSON	(n=20)	(n=118)	(n=63)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=24)	(n=373)
Quite a bit	55.0	50.9	23.8	33.3	42.9	34.1	7.0	43.6	16.7	34.6
Some	25.0	18.6	17.5	-0-	-0-	17.1	10.3	10.2	20.8	16.1
A little	20.0	14.4	12.7	33.4	14.3	19.5	15.5	15.4	29.2	16.3
None	-0-	16.1	46.0	33.3	42.8	29.3	67.2	30.8	33.3	33.0
TELEPHONE CONTACTS	(n=19)	(n=118)	(n=63)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=24)	(n=372)
Quite a bit	42.1	44.9	12.7	-0-	14.3	29.3	1.8	30.8	8.3	26.1
Some	26.3	17.8	7.9	-0-	-0-	12.2	8.6	5.1	4.2	11.8
A little	31.6	13.6	12.7	33.3	14.3	12.2	10.3	20.5	29.2	15.6
None	-0-	23.7	66.7	66.7	71.4	46.3	79.3	43.6	58.3	46.5
COMMUNICATING WITH SUPERVISORS	(n=19)	(n=117)	(n=63)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=24)	(n=371)
Quite a bit	52.6	55.6	23.8	66.7	28.6	63.4	20.7	56.4	41.7	44.2
Some	31.6	18.8	20.7	-0-	14.2	12.2	17.2	15.4	12.5	17.8
A little	-0-	11.1	9.5	33.3	28.6	17.1	15.5	5.1	16.6	11.9
None	15.8	14.5	46.0	-0-	28.6	7.3	46.6	23.1	29.2	26.1
COMMUNICATING WITH FELLOW EMPLOYEES	(n=20)	(n=117)	(n=63)	(n=3)	(n=7)	(n=41)	(n=57)	(n=38)	(n=23)	(n=369)
Quite a bit	45.0	47.0	15.9	33.3	-0-	41.4	17.5	42.1	30.5	33.9
Some	35.0	19.7	15.9	-0-	42.9	26.8	8.8	21.0	26.1	19.8
A little	-0-	15.4	14.2	33.3	14.2	9.8	19.3	5.3	21.7	13.8
None	20.0	17.9	54.0	33.4	42.9	22.0	54.4	31.6	21.7	32.5
READING INSTRUCTIONS, DIRECTIONS	(n=20)	(n=117)	(n=63)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=23)	(n=371)
Quite a bit	65.0	56.4	15.9	-0-	42.9	53.7	17.2	33.3	26.1	38.5
Some	15.0	24.8	14.2	-0-	-0-	7.3	6.9	23.1	21.7	16.7
A little	10.0	10.3	17.5	33.3	-0-	21.9	15.5	12.8	17.4	14.3
None	10.0	8.5	52.4	66.7	57.1	17.1	60.4	30.8	34.8	30.5
USING MANUALS AS A REFERENCE	(n=20)	(n=118)	(n=63)	(n=3)	(n=7)	(n=41)	(n=57)	(n=38)	(n=23)	(n=370)
Quite a bit	50.0	48.3	4.8	-0-	-0-	41.5	15.8	18.4	26.1	29.5
Some	25.0	19.5	11.1	-0-	-0-	9.8	-0-	15.8	17.4	13.2
A little	15.0	10.2	12.7	-0-	28.6	14.6	5.3	13.2	17.4	11.6
None	10.0	22.0	71.4	100.0	71.4	34.1	78.9	52.6	39.1	45.7
READING DIAGRAMS	(n=20)	(n=117)	(n=63)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=23)	(n=371)
Quite a bit	25.0	29.1	4.8	-0-	14.3	34.2	13.8	30.8	17.4	21.9
Some	20.0	11.1	3.2	-0-	-0-	7.3	3.4	20.5	13.0	9.4
A little	15.0	6.0	9.5	33.3	-0-	19.5	3.4	7.7	13.0	8.9
None	40.0	53.8	82.5	66.7	85.7	39.0	79.4	41.0	56.6	59.8
FILLING OUT FORMS	(n=19)	(n=118)	(n=63)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=23)	(n=371)
Quite a bit	63.1	55.9	9.5	-0-	-0-	39.0	8.6	20.5	13.0	31.3
Some	15.8	26.3	11.2	-0-	-0-	7.3	6.9	12.8	8.7	14.8
A little	-0-	6.8	7.9	33.3	-0-	14.7	10.3	15.4	26.1	10.2
None	21.1	11.0	71.4	66.7	100.0	39.0	74.2	51.3	52.2	43.7
WRITING SIMPLE STATEMENTS	(n=20)	(n=118)	(n=63)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=23)	(n=372)
Quite a bit	55.0	41.5	9.5	-0-	-0-	29.3	6.9	20.5	4.4	24.5
Some	25.0	22.0	14.3	-0-	-0-	14.6	5.2	10.3	17.4	15.3
A little	10.0	15.3	14.3	-0-	-0-	12.2	6.9	5.1	21.7	12.1
None	10.0	21.2	61.9	100.0	100.0	43.9	81.0	64.1	56.5	48.1
WRITING NARRATIVE/ DESCRIPTIVE PASSAGES	(n=20)	(n=118)	(n=62)	(n=3)	(n=7)	(n=41)	(n=58)	(n=39)	(n=23)	(n=371)
Quite a bit	40.0	28.0	1.6	-0-	-0-	17.1	3.4	7.7	8.7	15.1
Some	15.0	11.0	1.6	-0-	-0-	4.8	1.7	10.3	-0-	6.5
A little	20.0	11.0	9.7	-0-	-0-	12.2	3.4	7.7	13.0	9.7
None	25.0	50.0	87.1	100.0	100.0	65.9	91.5	74.3	78.3	68.7

Table P-3

Percentage of Trainees Who Need to Use English on Their Post-Program Jobs by Selected Language Skills by HELP Speaking Ratings (Wave II)

English Language Skill	HELP Speaking Rating (Wave II)																					
	Not At All (n=14)				Just a Few Words (n=41)				More Than a Few Words (n=98)				Well (n=146)				Very Well (n=73)				Total (n=372)			
	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None
Communicating With the Public in Person	-0-	-0-	21.4	78.6	2.4	7.3	14.6	75.7	16.3	16.3	20.4	47.0	39.8	22.6	17.1	20.5	74.0	11.0	8.2	6.8	34.7	16.1	16.1	33.1
Telephone Contacts	-0-	-0-	14.3	85.7	-0-	-0-	7.3	92.7	5.1	15.3	15.3	64.3	28.3	16.5	21.4	33.8	69.9	6.8	9.6	13.7	26.1	11.9	15.6	46.4
Communicating With Supervisors	-0-	-0-	14.3	85.7	2.4	9.8	14.6	73.2	33.7	22.4	17.3	26.6	51.7	21.4	10.3	16.6	76.4	12.5	4.2	6.9	44.3	17.8	11.7	26.2
Communicating With Fellow Employees	-0-	-0-	7.1	92.9	-0-	12.2	4.9	82.9	26.8	19.6	21.6	32.0	39.2	24.4	14.7	21.7	58.9	19.2	8.2	13.7	34.0	19.8	13.9	32.3
Reading Instructions, Directions	-0-	-0-	14.3	85.7	7.3	4.9	19.5	68.3	30.8	18.6	18.6	32.0	42.0	22.1	13.8	22.1	67.1	13.7	5.5	13.7	38.6	16.8	14.1	30.5
Using Manuals As A Reference	-0-	-0-	-0-	100.0	4.9	2.4	9.8	82.9	19.6	11.3	18.6	50.5	34.5	18.6	8.3	38.6	52.8	13.9	11.1	22.2	29.5	13.3	11.4	45.8
Reading Diagrams	-0-	-0-	7.1	92.9	2.4	-0-	9.8	87.8	13.3	7.1	11.2	68.4	22.9	13.9	8.3	54.9	46.6	11.0	6.8	35.6	21.9	9.5	8.9	59.7
Filling Out Forms	-0-	-0-	7.1	92.9	4.9	4.9	9.8	80.4	20.4	13.3	9.2	57.1	34.0	20.1	13.2	32.7	61.6	15.2	6.8	16.4	31.4	14.9	10.2	43.5
Writing Simple Statements	-0-	-0-	14.3	85.7	-0-	7.3	9.8	82.9	17.3	11.2	12.3	59.2	22.1	24.8	13.8	39.3	57.5	9.6	8.2	24.7	24.5	15.4	11.9	48.2
Writing Narratives/ Descriptive Passages	-0-	-0-	7.1	92.9	-0-	-0-	2.4	97.6	8.2	3.1	6.2	82.5	11.7	11.0	13.9	63.4	42.5	6.8	11.0	39.7	15.1	6.5	9.7	68.7

Table P-4

Percentage of Trainees Who Need to Use English on Their
Post-Program Jobs by Selected Language Skills by Mother Tongue

English Language Skill	Mother Tongue																			
	English (n=13)				Spanish (n=263)				Chinese (n=58)				Other (n=39)				All Language Groups (n=373)			
	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None	Quite A Bit	Some	A Little	None
Communicating with the Public in Person	61.5	15.4	7.7	15.4	36.1	16.3	17.6	30.0	10.3	13.8	15.5	60.4	51.4	17.9	12.8	17.9	34.5	16.1	16.4	33.0
Telephone Contacts	46.2	-0-	23.0	30.8	27.9	12.2	16.4	43.5	5.2	12.0	13.8	69.0	38.5	12.7	10.3	38.5	26.1	11.8	15.6	46.5
Communicating with Supervisors	69.2	15.4	15.4	-0-	45.6	16.1	12.3	26.0	24.2	20.7	10.3	44.8	56.4	25.6	10.3	7.7	44.2	17.8	11.9	26.1
Communicating with Fellow Employees	69.2	15.4	7.7	7.7	34.0	17.7	14.7	33.6	20.7	20.7	12.0	46.6	41.1	33.3	12.8	12.8	33.9	19.8	13.8	32.5
Reading Instructions, Directions	69.2	15.4	-0-	15.4	43.7	13.8	16.1	26.4	13.8	19.0	6.9	60.3	30.9	33.3	17.9	17.9	38.5	16.7	14.3	30.5
Using Manuals As A Reference	38.5	23.0	-0-	38.5	34.2	10.0	11.9	43.9	15.5	15.5	10.3	58.7	15.4	28.2	15.4	41.0	29.5	13.2	11.6	45.7
Reading Diagrams	38.5	7.7	7.7	46.1	22.6	6.9	9.6	60.9	13.8	13.8	5.2	67.2	23.1	20.5	10.3	46.1	21.8	9.5	8.9	59.8
Filling Out Forms	53.8	15.4	-0-	30.8	35.6	12.3	11.5	40.6	13.8	13.8	5.2	67.2	20.6	33.3	12.8	33.3	31.3	14.8	10.2	43.7
Writing Simple Statements	38.5	15.4	-0-	46.1	28.6	17.2	10.7	43.5	8.6	5.2	12.1	74.1	15.4	17.9	25.7	41.0	24.5	15.3	12.1	48.1
Writing Narratives/ Descriptive Passages	7.7	7.7	15.4	69.2	18.8	5.7	11.5	64.0	3.4	1.8	-0-	94.8	10.3	17.9	10.3	61.5	15.1	6.5	9.7	68.7

Table P-5

Degree of Emphasis Placed on Selected English Language Skills by Vocational and ESL Instructors and of Amount Trainees Need to Use these Skills on the Job by Training Occupational Area

(means)

English Language Skill	Occupational Area and Type of Respondent																
	Distribution			Health			Consumer and Homemaking		Office Occupations			Trade and Industrial			All Occupations		
	Voc.	ESL	Trainees	Voc.	ESL	Trainees	Voc.	Trainees	Voc.	ESL	Trainees	Voc.	ESL	Trainees	Voc. (n=107)	ESL (n=45)	Trainees (n=373)
Communicating with the Public in Person	3.3	4.0	3.0	3.8	4.0	2.7	3.0	1.3	3.0	3.8	2.8	3.1	3.7	2.3	3.1	3.9	2.5
Telephone Contacts	3.2	4.0	2.9	2.8	2.7	2.1	2.0	1.0	3.0	3.6	2.5	2.6	3.2	1.9	2.8	3.4	2.2
Communicating with Supervisors	3.4	4.0	3.3	3.3	3.3	2.8	3.0	1.7	3.1	2.7	2.9	3.6	3.1	2.7	3.4	3.0	2.8
Communicating with Fellow Employees	2.4	3.3	3.2	3.7	3.3	2.3	2.5	1.7	3.1	2.6	2.7	3.4	3.1	2.4	3.2	2.9	2.6
Reading Instructions, Directions	3.7	3.0	3.5	3.5	3.5	3.0	3.0	1.4	3.7	3.1	2.9	3.4	3.4	2.4	3.6	3.2	2.7
Using Manuals as a Reference	3.5	3.3	3.0	3.3	4.0	1.9	2.5	1.0	3.4	2.0	2.6	3.2	2.4	2.0	3.3	2.4	2.3
Reading Diagrams	2.8	2.3	2.1	2.8	3.7	1.6	2.0	1.0	2.7	2.4	2.1	3.3	2.6	1.9	3.0	2.6	1.9
Filling Out Forms	3.4	4.0	2.8	2.8	2.5	1.6	2.5	1.0	3.2	2.7	3.0	2.9	2.9	1.9	3.0	2.9	2.4
Writing Simple Statements	3.3	4.0	2.9	2.5	3.7	2.1	2.5	1.0	3.1	3.0	2.6	2.3	2.8	1.8	2.7	3.0	2.2
Writing Narrative/ Descriptive Passages	2.4	4.0	2.0	1.7	3.0	1.2	1.5	1.0	2.5	2.0	2.0	2.0	2.0	1.4	2.2	2.2	1.7

NOTE: Means defined by the following categories of emphasis and use:
4.0 = Quite a bit
3.0 = Some
2.0 = A little
1.0 = None

Table P-6

Comparison of Emphasis Placed on Selected
English Language Skills by Vocational and ESL
Instructors With Trainees' Need for Each English Skill on the Job
(percentage distribution)

English Language Skill	Instructors' Emphasis							
	Less Than Trainees' Needs		Same As Trainees' Needs		More Than Trainees' Needs		TOTAL	
	Voc.	ESL	Voc.	ESL	Voc.	ESL	Voc. (n=107)	ESL (n=45)
Communicating With the Public In Person	10.3	5.3	41.4	26.3	48.3	68.4	100.0	100.0
Telephone Contacts	6.9	5.3	44.8	36.8	48.3	57.9	100.0	100.0
Communicating With Supervisors	6.9	21.1	44.8	42.1	48.3	36.8	100.0	100.0
Communicating With Fellow Employers	6.9	10.5	44.8	31.6	48.3	57.9	100.0	100.0
Reading Instructions, Directions	-0-	5.6	41.4	50.0	58.6	44.4	100.0	100.0
Using Manuals As A Reference	6.9	21.1	24.1	52.6	69.0	26.3	100.0	100.0
Reading Diagrams	10.4	21.0	24.1	15.8	65.5	63.2	100.0	100.0
Filling Out Forms	3.4	5.6	41.4	33.3	55.2	61.1	100.0	100.0
Writing Simple Statements	17.2	5.3	34.5	15.8	48.3	78.9	100.0	100.0
Writing Narratives/ Descriptive Passages	10.4	10.5	37.9	36.9	51.7	52.6	100.0	100.0

APPENDIX Q

CORRELATION OF SELECTED TRAINEE ENGLISH LANGUAGE PROFICIENCY AND LABOR FORCE STATUS VARIABLES

CORRELATION OF SELECTED TRAINEE ENGLISH
LANGUAGE PROFICIENCY AND LABOR FORCE STATUS VARIABLES

The only significant relationships between trainee English language proficiency measures and labor force status of trainees was in relation to post-program weekly job earnings:

MELP Understanding - Wave II:	r=+.12
MELP Speaking - Wave II:	r=+.16
Ilyin Oral Interview Score - Wave II:	r=+.17

KIRSCHNER ASSOCIATES, INC.

EXECUTIVE SUMMARY

EVALUATION OF THE STATUS AND EFFECTS OF BILINGUAL VOCATIONAL TRAINING

Prepared as part of
Contract No. 300-77-0239

By
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and
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March 1980

Submitted to:
Office of Evaluation and Dissemination
U.S. Office of Education
Department of Health, Education, and Welfare

Submitted by:
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This publication was prepared pursuant to a contract (No. 300-77-0239) with the Office of Evaluation and Dissemination, U.S. Office of Education, Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express fully their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Evaluation and Dissemination position or policy.

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ACKNOWLEDGMENTS

The authors are deeply indebted to numerous persons for their assistance during this project. The Project Officer for this contract was Ms. Dorothy Shuler of the Office of Evaluation and Dissemination, U.S. Office of Education. Our special gratitude goes to Ms. Shuler, who was a continual source of guidance and encouragement throughout the three years of the contract. During the early stages of the study, Ms. Shuler was assisted by Ms. Anamaria Viveros-Long, who provided many helpful suggestions for the study design. Helpful comments also were provided by Dr. Emmett Fleming of the Office of Evaluation and Dissemination.

The cooperation and assistance of Dr. Doris Gunderson, who administered the Subpart 3 program during the period of this evaluation, and her staff are gratefully acknowledged.

Among the other government officials who were helpful in the conduct of the study are: Dr. Dorothy Waggoner, Mr. Leslie Silverman and Mr. Ron Jessee, National Center for Education Statistics; Mr. Greg Gross, Employment and Training Administration, U.S. Department of Labor: and Mr. George Sylvestre, Bureau of Labor Statistics, U.S. Department of Labor.

Dr. Paul Myers and Dr. Walter Howard of the Committee on Evaluation and Information of the Chief State School Officers were helpful in coordinating the early activities of this study with the State Departments of Vocational Education. Officials in all of the States provided information useful in identifying bilingual vocational training programs.

Our gratitude is extended to the directors, staffs and instructors of the 38 bilingual vocational training programs studied. Their help and cooperation were invaluable in accomplishing the field work for this study. Most importantly, we thank the 718 trainees who participated for their unique assistance and contributions to this evaluation.

Assistance was provided to the contractor's and subcontractor's staff during pilot field visits by Mr. J. William Goddard, Director of Career and Vocational Education, Sweetwater Union High School District, Chula Vista, California; and Dr. Paul Roman, Director, Rancho Santiago Community College District, Santa Ana, California. We are grateful to the cooperation shown by Mr. Goddard and Dr. Roman and the members of their staffs as well as to officials of Santa Ana Community College.

The following persons aided in the selection of English language proficiency measures: Dr. Walter Stolz of the National Institutes of Health (formerly of the Center for Applied Linguistics); Ms. Mary Jo Krowitz of the World Bank; Mr. Pardee Lowe, Jr. of the Central Intelligence Agency; Ms. Claudia Wilds, Dr. Ginny Redish and Ms. Mary Galvan, independent consultants.

Assistance in the design of the study was provided by Dr. Ty Hartwell, Research Triangle Institute; Dr. Burton Fisher, consultant to the Institute for Research on Poverty and Language, University of Wisconsin; and Dr. Stanley Lieberson, Arizona State University. Dr. William Peters of the University of New Mexico had primarily responsiblity for the sampling design.

Ms. Donna Ilyin assisted in the adaptation of the Ilyin Oral Interview for this evaluation and participated in training the field staff. Dr. Stolz and Ms. Ilyin assisted in the review and interpretation of language proficiency data.

Dr. Clement Chow, Iowa State University, assisted in training interviewers and translated trainee interview schedules to Chinese. Translation to Spanish was performed by Mr. E. E. Ortega, Jr. of Management Consultants Unlimited, Inc., the subcontractor. Mr. Ortega had major responsibilities for training and supervision of field staff. Dr. Morris Peterson of the contractor's staff also assisted in field staff training.

The field work was divided between the contractor and subcontractor and was conducted by the following persons:

Management Consultants Unlimited, Inc.	Kirschner Associates, Inc.
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Mr. Adolfo Ibarra	Mr. Pablo Scheffel
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Mr. José Salomon	
Mr. Miguel Sobrevilla	
Mr. Gabriel Tafolla	

Among the Contractor's staff, Ms. Cynthia Lancer had primary responsibility for conducting the inventory of bilingual vocational training programs and Dr. Mary Ella Brady assisted in the identification and adaptation of language proficiency measures. Dr. Peterson assisted throughout the evaluation in all of its aspects.

Computer programming and automatic data processing were handled by Mr. Barclay C. Bean.

Our appreciation is extended to those who reviewed the final report in draft: Dr. Stolz, Mr. Ortega, Dr. Chow, Dr. Peterson, and Mr. Richard W. Kirschner. Report production was handled by Ms. Joy S. Ford and Ms. Yvonne F. Clark.

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EXECUTIVE SUMMARY

I. PROGRAM AND EVALUATION BACKGROUND

Bilingual vocational training programs for adults with limited English-speaking ability have been authorized by the Congress since 1974. Such programs are funded currently under Subpart 3 of Part B, Title II of the Vocational Education Act of 1963, as amended. Subpart 3 requires the Commissioner of Education and the Secretary of Labor to:

1. Develop and disseminate information on the status of bilingual vocational training throughout the United States, and

2. Evaluate the impact of bilingual vocational training on the shortages of well-trained personnel, the unemployment or underemployment of adults with limited English-speaking ability, and the ability of such persons to acquire job skills and English language skills.

In helping to fulfill this mandate for program evaluation, this study is the first comprehensive examination of the characteristics of the clientele of bilingual vocational training and the operation and outcomes of programs providing such training. The evaluation results are germane to legislative and administrative policy making, and to operation of programs with Subpart 3 funding, State vocational education set-asides for limited English-speaking persons, and other sources.

This evaluation is timely for: (1) ongoing formulation and reevaluation of policy regarding the role of vocational education, particularly for disadvantaged persons; and (2) development of policy for serving the substantial numbers of limited English-speaking adults in the United States.

Persons of limited English-speaking ability come from environments, in this or other countries, where non-English languages are dominant. They may lack marketable job skills and their low English language proficiency may restrict their ability to profit from (indeed, to understand) vocational training in which the instruction is conducted only in English.

The traditional approach for serving adults of limited English-speaking ability is to provide them with English-as-a-second language (ESL) instruction prior to enrollment in vocational classes in which instructors speak only English. This approach has been prevalent because ESL is more widely available and accessible to limited English-speaking persons than is bilingual vocational training. However, persons whose only option is to take ESL prior to vocational training must postpone their vocational training. Thus, their entry or re-entry into the labor force also may be delayed.

Bilingual vocational training is an alternative to this traditional approach and allows limited English-speaking adults to learn a vocational skill through instruction in both their native language and English.

Bilingual instruction enables the trainees who would not understand all of the instruction if it were conducted only in English to acquire vocational skills. Instruction in English language skills focuses on reinforcing the vocational training.

II. EVALUATION DESIGN AND METHODOLOGY

This evaluation is based on a probability sample of 718 trainees in 87 vocational classes in 38 bilingual vocational training programs. The sample of trainees was designed so that it represents total annual enrollment in bilingual vocational training of limited English-speaking trainees during 1978. The programs funded under Subpart 3 account for one-third of the classes (29) and about 23 percent of the sample trainees (167).

The evaluation includes pre- and post-program measures of the labor force status of the trainees. The pre-program information was collected retrospectively from trainees during an initial interview while they were enrolled in the vocational classes during the Spring and Summer of 1978. A second interview was held with 518 of the trainees 9 to 13 months later (Spring and Summer of 1979) to obtain post-program information.

Measurements of English language proficiency were obtained during both of the interviews with trainees. The first measurement, obtained while they were still in training, was used to classify the trainees according to their English proficiency at that time. The second was used to analyze the relationships between English proficiency and labor force status. Because trainees enter programs throughout the year and it was not feasible to conduct year-round field work, pre-program English language proficiency measures could not be obtained; thus, program impact on trainees' English proficiency could not be assessed.

All information on program operations was obtained during the first wave of field work in the Spring and Summer of 1978 from personal interviews with program directors and vocational instructors in the programs and classes studied. Case studies were conducted of the relationships between vocational training and ESL instruction in 25 of the programs. Although the programs studied may not be completely representative of those conducted at other times, this evaluation provides information far more comprehensive and reliable than any to date and provides sound guidance for policy and program decisions.

A comparison group was sought, during design and field pretest work, to provide a basis for determining the net effects of bilingual vocational training. However, no valid comparison group exists because (1) adults who are not in vocational training are likely to have different skills and motivations than persons who are in training, and (2) trainees enrolled in vocational programs that are taught only in English are unlikely to be limited English-speaking and, therefore, would not be comparable to trainees in the bilingual vocational programs.

III. KEY FINDINGS

STATUS OF BILINGUAL VOCATIONAL TRAINING

As of the Fall of 1977, there were 98 bilingual vocational training programs in 20 states, excluding programs funded solely under Department of Labor sources. These 98 programs operated 267 bilingual vocational classes. An estimated 8,700 limited English-speaking trainees were enrolled in these classes over the course of a year.

The population of limited English-speaking adults in the United States is not known, but it is probably several million people. Some proportion of this population could benefit from bilingual vocational training. Thus, it appears that the current bilingual vocational training effort falls far short of meeting the need.

The target group of potential enrollees for bilingual vocational training programs is much more diverse than persons who were actually receiving such training in 1978. In view of the limited size of the bilingual vocational training effort to date and keen competition for available funds, enrollment of the various language and ethnic groups is not necessarily proportionate to the needs of the various groups. The level of enrollment in bilingual vocational training of any particular group in any given year is a function of that group's access to programs. The existence of programs is, in turn, based on a number of factors in addition to need, including interest of local institutions or organizations in developing a bilingual training program and their ability to obtain funding for a planned program.

THE TARGET GROUP AND TRAINEE CHARACTERISTICS

The target group for bilingual vocational training, as defined in the Subpart 3 legislation, consists of persons who are: (1) non-English-speaking or limited English-speaking and have a non-English native language, (2) 16 years of age or older and out of elementary or secondary school, (3) unemployed or underemployed, and (4) in need of acquiring new job skills or upgrading existing skills. Although the programs not funded under Subpart 3 did not necessarily have formal target groups, the recruitment focus appeared to be similar among all of the programs.

Persons of Spanish language background were the largest trainee group, and persons with a Chinese language background were the second most numerous. The native languages of other trainees included Vietnamese, Navajo, Lakota, Korean, and others.

Adults of Spanish language background comprised nearly three-fourths of all trainees in bilingual vocational training programs in 1978, compared to about 30 percent of persons of all non-English language backgrounds in the United States. However, in the bilingual vocational training programs funded nationally (Subpart 3), persons of Spanish language background, although the largest group, accounted for only

Table 1. Selected Demographic and Educational Characteristics of Trainees in Bilingual Vocational Training Programs, Spring - Summer 1978

Characteristic	All Trainees (n=718)	Subpart 3 (n=167)	Non-Subpart 3 (n=551)
Mean Age	33.3	31.3	33.9
Percent Male	39.7	41.3	39.3
Years of School Completed (mean)	10.2	10.6	10.1
Years of School Completed in U.S. (mean)	2.9	2.4	3.0
Percent Spanish Mother Tongue	74.1	49.1	81.7
Percent Chinese Mother Tongue	11.7	28.1	6.7
Percent Foreign Born	82.0	79.6	82.7
Mean Number of Years Lived in U.S. (for foreign born)	7.6	5.1	8.3
Percent with Prior Vocational Training	27.9	28.1	27.8
Percent Married	50.2	52.7	49.5
Percent Head of Household	43.8	29.3	48.2

about 50 percent of all trainees. (During both prior and subsequent years, persons of Spanish language background comprised a higher proportion of the total number of Subpart 3 trainees than in 1978.)

Compared to their incidence in the United States population of persons of Spanish language background, vocational trainees of Cuban origin were overrepresented by a factor of 8 to 1 and Mexican-born trainees were underrepresented (one-fourth the rate), while Puerto Ricans, Central Americans and South Americans were represented proportionately.

Nearly 12 percent of trainees were of Chinese language background, an incidence more than 7 times as great as in the population of all language minorities nationally. More than one-fourth of the trainees in the Subpart 3 programs were of Chinese language background.

Trainees in bilingual vocational training programs differed from persons enrolled in regular vocational programs on a number of dimensions. Women comprised a considerably higher proportion of enrollment in bilingual vocational training than in regular programs (60 percent vs. 50 percent). Age distributions of trainees were comparable in bilingual and regular vocational training, although, on average, trainees in the bilingual programs were slightly older.

The most substantial difference between trainees in bilingual vocational programs and those in regular vocational programs was in educational attainment. About 90 percent of enrollees in regular vocational programs had completed 12 years or more of school, while only about 44 percent of trainees in bilingual vocational training had that much education. Much of the education of the limited English-speaking trainees was received in foreign countries, and for the most part the medium of instruction was a non-English language. Although the mean number of years of school completed for trainees in bilingual vocational training was more than 10, the mean level of education in the United States (and of total English education) was only about 3 years. Thus, trainees in bilingual vocational training programs have somewhat lower total educational levels than enrollees in regular vocational training, but drastically lower educational attainment if only United States or English education is considered.

About 42 percent of the trainees in bilingual vocational training programs reported that they did not understand spoken English well, while about 52 percent reported that they did not speak English well. Only about 1 in 5 of the trainees rated their English comprehension "Very Well," while only 1 in 8 rated their English speaking that high. About 7 percent could not speak English at all. The English language proficiency of trainees was measured after they had been enrolled in training for varying lengths of time. About half of the trainees appeared to be within a few weeks of finishing their training; therefore, the proficiency levels presented here probably are somewhat higher than would have been obtained prior to program entry.

About 40 percent of the trainees in bilingual vocational programs did not work at any time during the year prior to entry. Nearly one-eighth of the trainees had never worked, and of those who had, about two-thirds had no more than 5 years experience in their usual occupations.

Unemployment rates were high for those trainees who were in the labor force. The average unemployment rate for all trainees over the entire year prior to program entry was 23.3 percent, and 33.9 percent during the week immediately prior to entry. About one-third of the trainees who worked during the year prior to program entry earned no more than about the minimum wage level.

PROGRAM DESIGN AND OPERATION

Bilingual vocational training programs were operating in many locations and settings in 1978. Programs existed in all major regions of the country and in all size labor markets from very small rural areas and Indian reservations to several of the largest metropolitan areas.

More than one-fourth of the bilingual vocational programs were operated by nontraditional educational organizations such as community organizations and skills centers. Some of these organizations had considerable experience operating bilingual vocational programs for adults, although Subpart 3 programs had much less experience on the average than programs funded from other sources.

The overriding objective of the programs was to produce job-ready workers, although all programs had multiple objectives. Other common objectives were to increase the English language proficiency of trainees and to teach good work habits and job-finding skills.

In line with the objective of producing job-ready workers, most of the programs planned curricula and courses with the aid of employers. Most of the programs reportedly used data on demand for specific occupational skills in planning and designing vocational classes.

Vocational classes were offered in a variety of occupational areas with somewhat heavy concentration in the office and trade/industrial fields. Entry level vocational skills were taught in nearly all of the bilingual vocational classes.

All bilingual vocational programs offered some supportive services to trainees. All programs provided job placement assistance, and nearly all offered at least one additional service, usually job counseling assistance. Most of the programs provided trainee stipends.

Job placement activities involved various staff members, including program directors, vocational instructors, counselors, and, sometimes, placement specialists. Most of the programs reportedly maintained contacts with employers and various community, labor and business organizations for purposes of job development and placement.

Most of the programs had conducted follow-up activities with employers and or former trainees. Contacts with employers often were to assess trainee performance and appropriateness of the skills training. Former trainees were contacted for similar assessments and were offered aid in finding jobs or obtaining needed services. Changes in curricula, teaching methods, equipment, facilities, and other aspects of the programs reportedly resulted from follow-up activities in most of the programs.

VOCATIONAL AND ENGLISH-AS-A-SECOND LANGUAGE INSTRUCTION

Almost all of the vocational instructors had experience in the trade or occupations that they were teaching, and nearly half of them were working in their trade while instructing on a part-time basis. Although the majority of the vocational instructors had prior experience teaching persons of limited English-speaking ability, two-thirds had not had any special training for working with that group. Most of the vocational instructors identified types of additional training, particularly in educational areas and instructional techniques, that they thought would be helpful to them in instructing limited English-speaking trainees.

The vast majority of the vocational instructors were from ethnic and cultural backgrounds similar to their trainees and also were bilingual in English and the native language of the trainees in their classes. A few instructors, however, were not proficient in the appropriate non-English languages, and they relied on a variety of other means of communicating

with trainees, including use of instructional aides and translators; non-verbal communication, such as demonstrations and gestures; and bilingual materials. Instructor-trainee communication was hampered in some of the classes because of enrollment of trainees from multiple non-English language groups. In these instances, vocational instructors used the various communication methods noted above as well as a fairly heavy reliance on the use of English as a necessary common denominator.

Some vocational instructors used English as the predominant language of instruction from the beginning of training, while others introduced English gradually to supplement and, eventually, to replace or nearly replace the native language of the trainees. In general, a discernible shift was noted from use of non-English languages to use of English from the beginning to the end of a class (or a trainee's attendance in the class). Higher levels of English use by the vocational instructors in the first week of class were associated most often with the instructors' low proficiency in the trainees' native language and comparatively fewer years of experience in working with limited English-speaking persons.

Trainees' self-reports of ability to understand their instructors' English in the class indicate that few had severe problems. About half of the vocational instructors provided additional assistance to trainees who had difficulty keeping up with the instruction.

Bilingual, multilingual or non-English vocational instructional materials were used in 40 percent of the classes. Many instructors cited a paucity of appropriate bilingual materials, and half of the non-English language materials being used were developed by the instructors.

Most of the bilingual vocational training programs had an ESL component although a few relied on only the vocational instructors to provide English language instruction. Many programs, particularly those funded under Subpart 3, emphasized coordination of vocational and ESL instruction to improve the job-related English of trainees and to reinforce vocational concepts and vocabulary in the ESL instruction. The most common method of coordination was exchange of job-related word lists and lesson plans between vocational and ESL instructors. The two types of instructors often discussed job-related vocabulary and each other's lesson plans on a formal or informal basis. In some programs, ESL-vocational coordination was handled through an intermediary such as the program director or ESL coordinator. In a sizeable minority of the programs, however, vocational instructors were unaware of ESL activities.

TRAINEE OUTCOMES

Pre-Post Changes in Labor Force Status

Favorable pre-post changes occurred for all trainee labor force status indicators. Unemployment rates dropped, job earnings increased, and the rate of labor force participation was up.

Unemployment dropped by more than 40 percent between the pre- and post-program periods. The average unemployment rate (number of weeks unemployed divided by number of weeks in the labor force) was as follows:

Table 2. Change in Average Unemployment Rate

Pre-Program	Post-Program	Pre-Post Change
22.5%	12.9%	-9.6 percentage points

Highest weekly job earnings of trainees increased by more than 16 percent:

Table 3. Change in Highest Weekly Job Earnings

Pre-Program	Post-Program	Pre-Post Change
$146.12	$170.09	+$39.32

The rate of labor force participation of trainees increased by about 25 percent, including an increase of about one-third (from 49 percent to 67 percent) for women trainees.

Factors Associated With Labor Force Outcomes

Unemployment. Improvements in the average unemployment rate between the pre- and post-program periods were greatest among trainees with high pre-program unemloyment rates, Puerto Rican-born or Central American-born persons, trainees who spoke "just a few words" of English at the time of the Wave I interview, persons who were under 25 years of age before entering the program, trainees who received more than 240 hours of vocational training, and trainees from Subpart 3 programs. Other variables associated favorably with unemployment rate changes include operation of the program by skills centers or regional occupation programs, coordination between vocational and ESL instructors, and post-program employment in an occupation matched to the training occupational area.

The favorable association of Subpart 3 funding with unemployment rate changes was accounted for partly by enrollment of persons with high pre-program unemployment and partly by programmatic factors such as vocational-ESL coordination and total hours of training offered.

Job Earnings. The greatest changes in increased weekly earnings were realized by trainees who are natives of Chinese-speaking countries and of Puerto Rico, trainees who had lived in the United States for no longer than 5 years, and trainees in Subpart 3 programs. Trainees with low pre-program earnings gained relatively more than trainees with high initial earnings.

The number of hours of vocational training received was related positively to earnings changes as were various other programmatic variables, such as vocational-ESL coordination, and the amount of English used by the vocational instructor. Changes in earnings also were related positively to training in occupations with persistently difficult-to-fill job openings in the local labor market, as well as to whether program officials consulted with employers or used occupational demand or shortage information in their planning.

Post-Program Job Satisfaction

More than four-fifths of the former trainees were satisfied with their post-program jobs as a whole, but satisfaction ratings for specific aspects of jobs varied considerably. The highest levels of satisfaction were reported for working conditions, supervisors and the usefulness and importance of the job. The lowest levels of satisfaction were reported for pay and fringe benefits, and for opportunities for (1) advancement with their employer, (2) developing new skills, and (3) using past training and education. Thus, trainees appeared to be more satisfied with their immediate job situation than with their prospects for advancement. Job earnings were correlated positively (and significantly) with most aspects of job satisfaction. The only aspects of job satisfaction that were unrelated to pay were the workers' ratings of their supervisors and working conditions.

CORRESPONDENCE OF POST-PROGRAM AND TRAINING OCCUPATIONS

About one-third of the former trainees of bilingual vocational programs were working in an occupation matched closely with their training occupational area. Employment in training-related post-program jobs was most frequent among persons who received training in the health, consumer/homemaking and trade/industrial occupational categories.

Trainees most often found training-related jobs if they attended a program in which there was joint program-employer planning. The total hours of vocational training received also were related directly to the frequency of post-program employment in a training related job.

OCCUPATIONAL DEMAND AND SHORTAGE FACTORS

The bilingual vocational training effort to date has been too limited for the programs to have had an appreciable impact on skills shortages. To the extent that potential skills shortage occupations can be identified accurately, it appears that bilingual vocational training programs have offered training for several such occupations, including home health aide, health assistant, dental assistant, paralegal aide, air conditioning and refrigeration repair, professional chef, and clerical occupations. Training was offered by bilingual vocational programs for other occupations with apparent high demand for labor in some locales.

TRAINEES' SATISFACTION WITH PROGRAM

At least 85 percent of the former trainees expressed satisfaction with various aspects of the program; only job placement services received a lower rating with one-third of the trainees expressing dissatisfaction. A high percentage (more than 92 percent) of the trainees were satisfied with both the ability and the methods of their instructors.

More than 60 percent of the former trainees indicated that they would have liked (1) more training before they started working, and (2) more English for their job. About half of them agreed that most of what was done on the job was learned in training, and nearly two-thirds said that they were able to apply most of what they learned in training.

ENGLISH NEEDS ON POST-PROGRAM JOBS

The former trainees' reports of English needed for various purposes on their post-program jobs indicate that:

- about one-third of the trainees usually spoke a non-English language with their supervisors;
- oral English skills were needed much more frequently on the job than either reading or writing English skills;
- persons who worked in professional/technical and clerical/sales occupations needed to use English most frequently, and those employed in services and bench work occupations needed English on the job the least; and
- the English needs of former trainees on their post-program jobs for specific purposes conformed generally to the emphasis placed on the various English skills by vocational and ESL instructors.

ENGLISH LANGUAGE PROFICIENCY AND POST-PROGRAM OCCUPATIONS

The highest English language proficiency levels of former trainees were found, on the average, in professional/technical, clerical/sales, machine trades, and structural occupations. The former trainees with the lowest English proficiency levels were most likely to be employed in services, processing and bench work occupations.

Post-program job earnings were higher for former trainees with high English proficiency, but post-program unemployment rates were lower for those with low English proficiency. English proficiency levels were not associated significantly with pre-post changes in earnings or unemployment.

The lack of association between English proficiency levels and post-program unemployment rates is probably attributable to the fact that the lower proficiency levels were found among the older trainees and their work experience enabled them to offset any English proficiency advantage younger workers may have had.

IV. EVALUATION

ANALYSIS OF LEGISLATION

In its "Statement of Findings" for the Subpart 3 legislation, the Congress presented several findings regarding the problems of limited English-speaking persons and the availability of vocational training suitable for that population. The findings of this evaluation represent bilingual vocational training as it existed more than 3 years after the passage of the original legislation. Therefore, it is useful to examine the original findings of the Congress in the light of updated information obtained for this evaluation.

The major findings outlined by the Congress and an assessment of each are as follows:

- Efforts of persons of limited English-speaking ability to profit from vocational education are severely restricted and the problem affects millions of U.S. citizens.

  This finding still appears to be as true as in 1974. Although reliable counts of the number of limited English-speaking adults are not available, they apparently number in the millions. Despite the magnitude of the problem, bilingual vocational training is not a widespread approach and has not expanded appreciably since the introduction of the Federal legislation.

- Limited English-speaking persons, because of lack of vocational training opportunities, are unable to help fill the critical need for trained personnel in vital occupational categories.

  This finding appears still to be true, and participation in bilingual vocational training sometimes enables limited English-speaking persons to obtain jobs in occupations that appear to have high demand for labor and possible skills shortages, although many skills shortage occupations appear to require high English proficiency levels.

- Limited English-speaking persons suffer the hardships of unemployment or underemployment.

  This finding is confirmed by the status of those persons who have been enrolled in bilingual vocational training programs. Unemployment rates of persons in bilingual vocational programs were 3 to 4 times as high as the national rate prior to entering training. Weekly earnings of those who were employed prior to entering training were at a level of about 80 percent of the average nationally for nonsupervisory workers.

- A critical shortage exists of instructors possessing both the job knowledge and dual language capabilities required for adequate vocational instruction of limited English-speaking persons and to prepare those persons to perform adequately in a work environment requiring English language skills.

  Program operators generally reported that they had not experienced problems in finding skilled bilingual vocational instructors. However, some of the instructors had low levels of proficiency in the trainees' native languages. Expansion of bilingual vocational training in areas already served or into new areas probably would unearth more severe shortages of qualified instructors who are also bilingual.

- A shortage exists of instructional materials and of instructional methods and techniques suitable for bilingual vocational training.

  Apparent shortages of appropriate non-English and bilingual instructional materials were found in many training occupational areas, and vocational instructors often developed their own bilingual materials. A variety of methods are used for instruction in vocational and English language skills as well as for the integration and coordination of instruction in the two skills. Such variety results from the diverse backgrounds of trainees, availability of materials, and other factors.

The precepts and findings of the Congress as stated in the Subpart 3 legislation appear to be generally valid today.

PROGRAM EVALUATION

Process Evaluation

The process evaluation is concerned with the following questions. Did the programs:

- enroll the appropriate target group?
- provide effective instructional services?
- provide appropriate and adequate noninstructional and supportive services? and
- reflect effective planning and management?

Target Group Enrollment. Trainees in the bilingual vocational training programs generally met the eligibility criteria as set forth in Subpart 3--adults who are limited English-speaking by virtue of a non-English language background and who are unemployed or underemployed.

Instructional Services. The vocational and ESL components appeared to complement each other well in the bilingual vocational training programs. The two types of instructors placed different amounts of emphasis on various types of job-related English language skills, and in different instances each type of instructor came closest to the degree to which the trainees needed the English skills on their post-program job. Because one type of instructor often comes closer than the other to assessing trainees' on-the-job language needs, the importance is underscored of coordination of the two types of instruction.

Vocational instructors in bilingual vocational training programs were not always proficient in the trainees' native languages, and not all of them had prior experience working with limited English-speaking persons. Not all vocational instructors were expert in instructional techniques, and they recognized that fact. The vocational instructors were, however, experienced in their trades and had backgrounds appropriate for instructing in the various occupational areas. The vocational instructors were the nerve center of many programs, not only for job skills instruction but for job placement, trainee counseling, materials development, and other functions.

Non-Instructional and Supportive Services. The provision of supportive services by the programs varied widely, depending upon trainees' needs and available resources. Although some program directors cited the need for additional resources, particularly for personal counseling and trainee stipends, the availability of most services generally appeared adequate.

Program Planning and Management. Generally, program administrators appeared to plan (or attempted to plan) occupational offerings in relation to local labor market demand factors. Involvement of employers and other community resources, especially in curricula planning and in job development/placement activities, was pursued frequently and often effectively. Feedback from both former trainees and their employers was reported to be a frequent program management technique, often resulting in changes in program operation.

An important aspect of program management that appears to be of varying effectiveness and that requires continuing attention is the coordination of the vocational training and ESL components of the programs. Although such coordination is practiced in effective and innovative ways in several programs, in other programs vocational and ESL instructors work too independently for the instruction in English language skills to be integrated adequately with the occupational skills instruction. This problem indicates a need for the development of mechanisms and procedures for effective coordination as well as for continuing instructor education.

Evaluation of Program Effects

The concerns of the evaluation of the effects of bilingual vocational training programs are drawn from the stated and implied goals of

increasing trainees' (1) employment status by providing them with marketable job skills, and (2) English language proficiency.

Effects on Trainees' Labor Force Status. The decline of trainees' pre-post unemployment rates was nearly twice as great as the decline in the aggregate unemployment rate and nearly 5 times as great as the decline in the average unemployment rate for the labor areas in which the trainees lived. This magnitude of change makes it extremely likely that participation in bilingual vocational training influenced trainee employment very favorably.

The improvement in trainees' pre-post earnings was closely comparable to the rate of increase for all nonsupervisory and production workers nationally. Considering their initial disadvantages in competing in the labor market, the improvement in earnings appears likely to have been influenced strongly by participation in the program, although this conclusion is less clearcut than with respect to the change in unemployment rates.

Bilingual vocational training programs have demonstrated that it is possible to train limited English-speaking adults for some occupations with high demand for labor and potential skills shortages. A much expanded bilingual vocational training effort would be required for perceptible impacts to occur with respect to obviation of skills shortages.

Effects on Trainees' English Language Proficiency. On average, improvements occurred in the English language proficiency of the trainees between the time they were enrolled in the program and several months after leaving the program. Although it was not possible to assess trainees' pre-post English language proficiency changes, the data suggest that gains probably occurred and that all or some portion of these gains were maintained for several months after leaving training.

Overall Evaluation

Bilingual vocational training, as conducted in programs funded under both Subpart 3 and other sources, is an effective approach for providing occupational skills training to limited English-speaking adults. Compared with other types of vocational education, there has been less experience with bilingual vocational training, yet the programs generally have operated effectively in terms of both (1) activities that are responsive to trainees' needs and labor market realities, and (2) employment and earnings outcomes of trainees.

V. CONTRACTOR'S RECOMMENDATIONS

Recommendations regarding both the legislation and administration of bilingual vocational training are presented by the contractor for consideration by policy makers.

LEGISLATIVE

The legislative recommendations and a brief statement of the rationale for each are as follows:

- Bilingual vocational training for adults with limited English-speaking ability should be continued as a national program.

  Bilingual vocational training is one effective approach for attaining the goal of improving the job skills and employability of limited English-speaking adults. So long as this remains a national goal, State and local efforts should be supplemented by a national program to insure adequate response to the training needs of the target group.

- Funding should be increased for bilingual vocational training for limited English-speaking adults.

  Appropriations for the Subpart 3 program to date have been very limited (about $2.8 million per annum). Resources for the program should be increased substantially from the present low levels in view of (1) the magnitude of the problem being addressed by the program, (2) the favorable results of the program to date, and (3) the capability of the program to prepare trainees for the job market without lengthy training in English language skills. Concomitant increases should be made in funding for instructor training and development of bilingual materials.

- Future legislation concerned with training of limited English-speaking adults should contain provisions for bilingual vocational training.

  The types of relevant legislation include not only vocational education, but laws, for example, related to employment and training or services for refugee groups. Bilingual vocational training offers a particularly suitable approach for speeding the assimilation of immigrants into American society and their productive involvement in the labor force.

ADMINISTRATIVE

Recommendations for the administration of bilingual vocational training programs for adults and the rationale for each are as follows:

- Trainee recruitment efforts should focus on enrolling persons with high unemployment and low previous earnings when other criteria are met.

  This evaluation demonstrates that the highest payoff is obtained with this recruiting focus. That is, those trainees benefit most, economically, and, presumably, society's cost for transfer payments (such as unemployment compensation) would be reduced.

- Priority should be given to the development of vocational instructional materials for selected occupations.

  Shortages of adequate non-English and bilingual instructional materials are well-recognized. Two possible approaches to alleviating these shortages are to (1) identify a few key occupations which are appropriate for bilingual vocational training and develop or adapt suitable materials for those areas, and (2) develop a clearinghouse mechanism for the interchange of self-developed bilingual materials among vocational instructors. The second approach could be expanded to commissioning vocational instructors for the development of new materials.

- Research is needed to determine English language skills required or used in selected occupations.

  These occupations should be selected from among those with strong growth possibilities over the next several years. A finding of this evaluation of potential importance is that the average level of English language proficiency of former trainees employed in machine trades and structural occupations was only slightly below the proficiency level of persons employed in professional/technical and clerical/sales occupations. Although this may not be a result of English requirements in the occupations, that possibility should be explored to determine more precisely the English needs in such occupations as machinist, mechanics, air conditioning and heating repair, and welder. Intensive study of the actual tasks on the job is required to determine language needs adequately.

- Instructor training should focus on development of a cadre of instructional aides as well as vocational instructors.

  Capable bilingual instructional aides can help alleviate the shortages of qualified bilingual vocational instructors and can permit the development of bilingual vocational training programs even when the instructor is not bilingual. As this evaluation shows, aides who can translate to the trainees' native languages can be an important factor in classroom communication, particularly when there is more than one non-English language group among the trainees.

- Continuing effort should be placed on development of effective mechanisms and procedures for coordinating vocational and ESL instruction.

  In the Subpart 3 programs, additional training and orientation for vocational instructors as well as program directors and ESL instructors may be helpful. Coordination also could be facilitated through the use of instructional aides.

- Bilingual ESL instruction should be studied as an approach for very limited English-speaking persons.

  A relatively few very limited English-speaking trainees still had very low English language proficiency after leaving the program. Such persons and other limited English-speaking trainees may benefit from a bilingual approach to ESL. Bilingual ESL was provided by some of the programs studied. Bilingual ESL could be investigated for its applicability on a wider scale.

- Training should be encouraged for social service and related paraprofessional occupations for serving language minorities.

  There is a relatively limited amount of training in bilingual vocational training programs for social service occupations. Some limited English-speaking persons appear to be particularly suited to such occupations which directly serve language minority and other limited English-speaking persons. Thus, the work draws upon knowledge of both English and the non-English language, but very high levels of English proficiency are not required to work with a limited English-speaking clientele.

Implementation of the above recommendations, it is believed, will contribute to meeting the training needs of limited English-speaking adults. These recommendations are offered for the purpose of improving already effective programs.